STEEL

EDITORIAL INDEX

for

VOLUME 142

January 1 to June 30, 1958

Subject Index 3

Company. Index . . . 14

Author Index 24

THE PENTON PUBLISHING COMPANY

Penton Building, Cleveland 13, Ohio

SUBJECT INDEX

A

Abrasives:
Abrasive belts cut roll grinding costs, 3/31, p.92
Abrasive solves (barrel) finishing problem at Bendix, powder pellets, 6/30, p.98
Coated abrasives advance (Behr-Manning show), 6/30, p.92
Markets:
Abrasive shot, 4/28, p.64
Abrasive wheels, 1/27, p.47

Accidents: See Safety

Acid Handling:
Automatic liquid level control insures safe handling, 4/28, p.115

Acoustical Materials Assn.:
Elects president, 4/28, p.91

Adhesives:
Adhesives improve product quality (loudspeakers): Assembly of metal parts with plastics, 6/16, p.113
Honeycomb adhesives, TO, 2/10, p.77

Air Conditioning:
Gas heat cools plant, 3/3, p.94
Machine cuts duct costs, 2/3, p.125
Sales outlook, 3/17, p.38; 3/10, p.83

Air-Conditioning & Refrigeration Institute:
Elects, B, 5/19, p.118

Aircraft:
Air traffic control proposed, 5/19, p.92
Helicopters catch on, industry use, 3/31, p.54
Magnesium-thorium use, heat resistant, 5/26, p.99
Reflectors, new bond, TO, 6/9, p.87
Space age metals preview, 5/5, p.86
Space age metal facts, 6/16, p.102
X-15 rocket plane has stainless skin, 3/31, p.51

Aircraft Industries Assn.:
Aluminum-lithium alloy studied for heat resistance, TO, 5/26, p.99

Air Force:
Bomarc (surface to air missile) uses magnesium-thorium alloys, 2/17, p.148

Air Force Assn.:
Ballistic missile subcontractors, list, 3/17, p.49
Meeting: Missile changeover outlook, 3/3, p.48

Air Pollution: See Smoke, Smog

Allotments: See ODM

Alloys:
Braze welding copper and its alloys, 5/26, p.122
Brazing alloys tackle heat barrier, 5/19, p.140
Bronze alloy, high strength, 5/12, p.102
Casting alloy NA3, withstands creep, 6/16, p.121
Casting alloy, TO, 5/26, p.99
Chromolloy parts, heating tech., 5/26, p.102
Cobalt, where mined, consumption, 2/24, p.38
Columbium, still on trial, 4/21, p.62
Hastelloy X used for sleds in annealing furnaces, 6/23, p.107
Jet alloy Lapelloy "C," for engine parts, 5/5, p.104
Jet alloy Nicrotung, for turbine blade, 5/12, p.102
Jet engine and gas turbine alloys, D-979 and AF-71, 5/26, p.117
Lukens Nine Nickel, for below zero use, 6/23, p.95
Machining problems, aircraft, 4/7, p.116
Missile use:
Aluminum and stainless for structurals; stainless protects Atlas, 5/12, p.51
Magnesium-thorium for AF-Bomarc, 2/17, p.148
Magnesium-thorium chem-milled, 6/30, p.86
Nonferrous role in missile 'birds,' 4/14, p.96
Space age metals, 6/16, p.102
Stainless forms nose of Army Explorer, 3/24, p.106
Nickel-base alloys advance, 2/17, p.177
Tubing alloys, TO, 2/10, p.77
Vacuum melted alloys, GE adds two more, 6/16, p.108
Vacuum-melted alloy, Rene 41, new, 5/5, p.104
Welding copper and its alloys, 1/27, p.88; 2/24, p.90; 3/17, p.110; 5/5, p.106; 5/26, p.122

Aluminum:
Aluminum capacities (producers), 3/24, p.55
Aluminum forecast (Aluminium Ltd.), 4/14, p.91
Aluminum scrap, market report, 6/9, p.139
Auto use:
'58 model uses, 1/20, p.50
Aluminum block engines, 5/19, p.100
Aluminum engine closer, 6/9, p.70
Aluminum engines, small firms, too, 6/30, p.63
Anodized grilles, 1/13, p.49
Bearings, steel-backed aluminum, 1/20, p.82
Bearings, aluminum and tin, 3/31, p.90
Brazing, aluminum-stainless, TO, 5/12, p.85
Coated aluminum steel sheets, 6/2, p.30
Coated aluminum steel wire, 5/12, p.100
Coated (markets): Porcelain enamel on aluminum, 3/3, p.143
Facilities under construction, 3/31, p.140
Kaiser hot rolling mill, 6/9, p.58
Kaiser welding methods, 3/24, p.128
Missile metal (structurals), 5/12, p.51
Ormet reduction plant, 6/2, p.62
Railroad boxcar roofs, 4/21, p.85
Reactor alloy X-8001, TO, 5/12, p.85
Work boat, all aluminum, 4/7, p.94

Aluminum Assn.:
Elects, 2/17, p.108

Aluminum Foil Container Manufacturers Assn.:
Elects, 2/17, p.108

American Die Casting Institute:
Diecasting sales, shipments, 3/17, p.152
Protests aluminum contracts price, 3/17, p.38

American Foundrymen's Society:
'58 nominations, 2/3, p.100

American Gear Manufacturers Assn.:
Meeting, elects, 6/9, p.59

American Home Laundry Manufacturers' Assn.:
Convention: Buy It Now campaign, 5/5, p.69
Elects, 1/20, p.62

American Hot Dip Galvanizers Assn.:
Elects, B, 4/14, p.122

American Institute of Electrical Engineers:
Nominations, 2/24, p.66

American Institute of Mechanical Engineers:
Open hearth meeting: Nozzle design, 4/21, p.144

American Institute of Mining, Metallurgical & Petroleum Engineers:
Group visits Russia, 4/7, p.56
Metallurgical Society elects, 4/7, p.98

American Iron Ore Assn.:
Elects, B, 6/23, p.84

American Iron & Steel Institute:
AISI meeting: Tax laws hit, tech reports, 'award' winners, 5/26, p.57
Average hourly pay, 5/12, p.39; 6/16, p.41
Elects, B, 6/2, p.63
Iron and steel firms, 1st quarter revenue and profit, 6/23, p.51
Steel prefabs boom, 4/7, p.65
Steel product standards discussed, Philadelphia meeting, 1/20, p.77

American Machine Tool Distributors Assn.:
Meeting, sales report, 3/17, p.44

American Management Assn.:
1960s outlook, balanced management (Appley), 2/17, p.115
Economic mobilization conference, antirecession program, 5/26, p.63; scheduled, 4/28, p.61
Small business forum (Sen. Thye speaker), 6/30, p.59
Supervisor pay, foremen and office supervisors, 4/14, p.90

American Nuclear Society:
Moves headquarters, B, 5/12, p.82

American Society for Abrasives:
Elects, B, 2/24, p.66

American Society for Testing Materials:
Elects, B, 6/23, p.84

American Society of Lubrication Engineers:
Elects president, B, 5/5, p.80

American Society for Metals:
A program for space age research, 6/16, p.103
Tech center, Cleveland, 3/10, p.80

American Society of Tool Engineers:
Annual meeting, conferences, 4/21, p.153
Barriers to faster cutting superspeeds, meeting report, 5/5, p.100
Convention center stresses cost cutting, exhibitors, 5/12, p.50
Numerical controls, study, 5/5, p.100

American Standards Assn.:
Elects, B, 2/3, p.100
Standards Council elections, 1/13, p.66

American Steel Warehouse Assn.:
Convention (Las Vegas): Steel warehouse '70 style, 5/12, p.119
Elects, B, 5/19, p.118

American Supply & Machinery Manufacturers' Assn.:
Elects, B, 5/5, p.80; 6/16, p.76
Mill supply orders drop, 6/2, p.29

American Tin Trade Assn.:
Elects, B, 5/26, p.93

American Welding Society:
Elects, 5/5, p.80
St. Louis show, welding wire shown, 4/14, p.91

American Zinc Institute Inc.:
Cook, marketing dir., 3/24, p.92
Convention, business outlook, 4/28, p.64
Elects, B, 4/28, p.91

Amortization: See Depreciation

Annual Reports:
Gain and keep stockholders, annual reports, press relations, etc., 2/17, p.76

Anodizing:
Chevrolet grilles, 1/13, p.49
Titanium tipped racks, TO, 2/17, p.123

Appliances:
Combination refrigerator — hot water heater, TO, 3/17, p.93
Electrical equipment, Detroit Edison forecast, 2/24, p.36
Gas equipment, industry report, 6/16, p.49
Kitchen cabinet sales, 6/9, p.61
Leasing — long term emerging, 6/23, p.57

Appraisal Counseling:
For balanced management, 2/17, p.114

Area Development:
Agency aids unemployment areas, industrial development, 2/24, p.30
Virginia steel facilities, 1/13, p.10
West Coast growth, 5/5, p.54
West Coast mills, 3/24, p.89

Argonne National Laboratory:
Director elected, 2/24, p.66

Armour Research: See Illinois Inst.

Army:
Fights for its life, defense policy, 6/23, p.54
Missile chief, Medaris, 3/31, p.52

Associated Industries of Cleveland:
Coffee break, costs mount, 1/27, p.31
Slichter (Harvard) speaks, 3/10, p.77 and p.97
Vacation trend, 6/2, p.29
Wage settlements, per hour, 3/10, p.74

Association of American Railroads:
Builds lab, B, 3/31, p.75

Association of Lift Truck & Portable Elevator Manufacturers:
Elects, B, 1/13, p.66

Association of Missile & Rocket Industries:
Cleveland meeting, 4/7, p.68
Contract speedup-cut red tape, survey, 2/3, p.63
Contractors in missiles (company list), 1/13, p.42
Contractors and personnel, salesman's guide, 6/23, p.42
Hoyt made director, 2/3, p.63

Association of Steel Distributors Inc.:
Elects, 2/24, p.66

Atomic Energy:
Articles:
Prospects for atomics—its pitfalls, potentials, markets, 3/3, p.53
Russia lags in atom race, 1/13, p.46
Scoreboard for power type nuclear reactors (builders, etc.), 1/13, p.47
Atom smasher, Midwest Universities Research, 5/19, p.113
Atomic plant passes test: AEC-Duquesne Light (Shippingport plant), 6/9, p.83
Atomics aid export sales, foreign market, 1/27, p.41
Auto (Astral), foreseen, 3/31, p.62
Auto (Nucleon), Ford research, 3/31, p.62
Casters see high pressure nuclear applications, 5/26, p.120
Castings specs-stainless steel for reactor valves, 2/10, p.98
Nuclear equipment sales soaring, 2/17, p.104
Reactor submerged in "swimming pool," Ann Arbor, pic., 3/3, p.53
Reactors—aluminum clad fuel elements, TO, 6/2, p.65
Submarine program, 2/3, p.70
T-1 steel for nuclear aircraft tests, 3/31, p.94
Transporting radioactive fuel elements, 3/3, p.117
What AEC is spending, 3/3, p.54

Atomic Industrial Forum Inc.:
Nuclear equipment sales soar, 2/17, p.104
Radioactive materials, uses, 2/3, p.58

Automation:
18 ways to move parts in a heat treating furnace, 6/23, p.90
Automated foundry system is flexible, Switzerland, 6/16, p.98
Automation congress meet, market potential report, 6/23, p.42
Evinrude: Automatic system trims handling costs, 3/31, p.98
Ford hardware div.: Automatic assembly moves ahead, 3/3, p.120
Framall Works: One furnace does three jobs, 2/24, p.74

GE-motor and generator dept.: Automates job shop, 1/27, p.38
GE-Rader report: Small lot automation is here, 3/24, p.125
Gillette Safety Razor: Automatic assembly trims costs, 3/24, p.104
Heald: Rotary surface grinding automatic, 6/30, p.84
Hoffman Engineering: Mechanized finishing boosts profits (conveyorized system), 6/23, p.92
Midland-Ross: Continuous strip descaling line, 3/10, p.136
Ohio Rubber: Continuous molding process, close tolerance for small parts, 6/30, p.59
Pesco Products: automatic warehouse, 5/12, p.55
SAE meeting discussion, 4/14, p.99
Soldering line automatic, 6/2, p.68
Stanley Co.: Plater unloads automatically (door hinges), 2/24, p.83
Timken: Bearing line needs few operators (Columbus), 6/2, p.80
Westinghouse-Fort report: Industry not ready, 2/17, p.68
See Office Automation

Automobile Manufacturers Assn.:
Elects chairman, 2/24, p.66

Automotive:
1958: Detroit aims at productivity, 1/6, p.139
1959 standardization aim, 2/10, p.57
1959 models early, concensus, 5/5, p.65
1959 models, features, 5/12, p.59
1960-61 model plans (Ford-Ebejer works on idea car) pic., 5/19, p.99
Air springs, 2/10, p.58
Air springs, tractors, 2/17, p.88
Aluminum block engine design, 5/19, p.100
Aluminum engine closer, 6/9, p.70
Aluminum engines, small firms have them, too, 6/30, p.63
Argonaut (report), 3/17, p.58
Argonaut adds limousine, 4/14, p.100
Atomic-powered 'Nucleon' (Ford); 'Astral' (S-P), 3/31, p.62
Auto bumpers, stripped parts ready for replating, 2/3, p.112
Auto frame production line, A. O. Smith, 4/21, p.71
Bearings, aluminum-on-steel, 1/20, p.82
Buick styling, pic., 4/28, p.69
Cadillac grille, cold impact extruded ornaments made by Doehler-Jarvis, 2/17, p.87
Chevrolet grille, anodized aluminum, 1/13, p.49
Chrysler gambles in '58: Colbert keeps designer Exner, 2/3, p.77
Daimler-Benz discuss aluminum engine, 6/9, p.70
Dealer sales slump, wait for spring, 3/3, p.67
Dealer shift to suburbs, Detroit plans swap arrangements and syndicates, 3/24, p.75
Engineers gain stature (SAE meeting), 4/14, p.99
Financial stability for firms, 6/30, p.64
Fleet car costs: Lease or buy?, 2/10, p.48
Ford: Breech, Nance, McNamara (power battle looms), 3/17, p.57
Ford consolidates: Nance heads M-E-L Div., 1/27, p.51
Ford-Edsel, 90 days to produce, 4/7, p.75
Ford-German Taunus, 4/7, p.76
Ford-Thunderbird sales, 3/31, p.62
Ford, T-Bird, pic., 4/28, p.69
Foreign cars: Why imports mount, 2/24, p.49
Fuel regulator (Acon-o-mizer, 6/9, p.70
Inventories hold sales key, 6/2, p.49
Jaguar XK 150 roadster, 4/14, p.100
Labor contracts (see Labor)
Olds made by AAP, 6/23, p.62
Plastic trim, 2/10, p.58
Production (firms), 1st 2 months, 3/3, p.67
Production (firms), 1st quarter, 4/14, p.100
Production (Big Three), 5/12, p.60
Safety probe, 4/21, p.72
Sales upturn seen, 3/31, p.61
Shock absorbers, driver dial controls, 1/20, p.79
Small car rumors, Ford-GM, 3/10, p.73; 4/21, p.72
Small vs luxury car?, 3/17, p.38
Small cars: Now or later?, 5/26, p.71
Station wagons, bigger markets, 3/10, p.93
Strike odds change, 3/10, p.94
Studebaker-Packard: Survival at South Bend?, 1/20, p.49
Styling, what do car buyers want?, 4/28, p.69
Stylists can save big cars, 6/16, p.61
TV for Olds, 2/17, p.88
Tin used (Ford), 2/17, p.88
Tire balancer test, Pontiac, 3/24, p.75
Truck sales slow, 6/9, p.69
Volvo (Sweden) smokeless diesel truck, 4/14, p.100

B

Bank Credit: See Financing

Barrel Finishing:
Abrasive (pellets) solves finishing problem, 6/30, p.98
Barrel finishing boosts output (gasoline engine parts), 5/12, p.99
Vibraslide aids tumbling, 3/24, p.109

Bars:
Customers call the temper for stainless bars, 2/24, p.75

Battelle Memorial Institute:
Appoints Thomas president, 2/24, p.66; Simmons, metals research chief, 3/17, p.81
Aluminum-clad wire, new coating process, 5/12, p.100
Cobalt Information Center, 2/24, p.38
Forging lubricants, TO, 4/14, p.135
Pressure cladding research, TO, 4/28, p.97
Tougher missile welds, TO, 1/27, p.71
Vacuum melting furnace, TO, 2/17, p.123

Batteries:
Tomorrow's power sources, TO, 5/5, p.83

Bauxite:
Hawaiian deposits, 2/10, p.50

Bearings, Bushings:
Aluminum-on-steel engine bearings: These bearings don't wear out, 1/20, p.82
Aluminum-tin bearings, 3/31, p.90
Automated bearing plant, Timken-Canton, 6/2, p.80
Band saw cuts bearing costs, 3/17, p.100
Motor bearing brackets tackwelded before boring, 2/10, p.95
Technical Outlooks:
Air bearings, 6/30, p.79
Antifriction bearings reclaimed, 6/30, p.79
Babbitt bearings-embedded mesh, 2/10, p.77
Ball bearings for missile instruments, 3/24, p.103
Bearings get metal spray, 6/2, p.65
Bushings-grinding wheel, paper base resin, 2/3, p.107

Bending: See Forming, Bending

Billet Scalpers: See Cutting

Blast Furnace Operations: See Steelmaking

Bolts: See Fasteners

Bonding:
Aluminum-on-steel bearings, 1/20, p.82
Aluminum-on-tin bearings, 3/31, p.90
Aluminum-stainless, brazing tech., TO, 5/12, p.85
B.M.I. bond for bimetallics (Doehler-Jarvis), 4/14, p.157
Cold cleaner aids prepaint phosphate coating to sheet metal, TO, 5/19, p.135
Concrete bond, TO, 3/10, p.121
Marvibond: Plastic-coated metals, 4/7, p.104

Books, Booklets:
Gray iron castings handbook, 2/24, p.107
Qualitative testing and inorganic chemistry: Joseph Nordmann, 3/3, p.139

Boring:
Tackwelding motor bearing brackets before boring, 2/10, p.95

Boron:
Boron-based fuels, 4/14, p.95
Boron-nitride, ceramic material, 4/28, p.97

Brainstorming:
How to sell ideas to bosses (Cleveland panel), 4/7, p.71

Brass: See Copper & Brass

Brazil: See South America

Brazing:
Braze welding copper and its alloys, 5/26, p.122
Brazing alloys tackle heat barrier, 5/19, p.140
Brazing outboard motor engine assemblies, paste silver alloy, 6/2, p.69
Brazing salvages cracked stampings, 3/3, p.110
Brazing strip eliminates rejects (silver alloy), 2/10, p.83
Fluxing speedup, 6/16, p.110

Bridges: See Construction

British Iron & Steel Research Assn.:
Cyclosteel report, TO, 6/23, p.89

Brushing:
Power brushing accelerates, 2/24, p.40

Bureau of National Affairs:
Wage gains in '57, 2/3, p.57

Burnishing:
Feeder slashes burnishing costs '95%', (steel pins), 2/17, p.140

Business (Economy):
A review of 1957, YC, 1/6, p.127
1958 outlook, 1/6, p.109
3rd quarter outlook, NICB, 3/17, p.37
1960s—Get set' Editorial (GE example), 1/27, p.35
AMA economic mobilization conference, antirecession program, 5/26, p.63
Baruch calms recession fears, 4/14, p.92
Business failures uptrend, 6/2, p.55
Canada's recession, 3/24, p.55
Credit terms, President's Council-FRB, 1/27, p.44
Economists' views: Why do prices rise, 5/19, p.79
Economists view recession, 1/27, p.55
Hitchings (Ford) reports, 2/17, p.67
Hitchings' recession timetable, 2/24, p.36
Moore (NBER) speaks, 3/17, p.63
Palmer (Carpenter Steel): Inventories key to recovery, 5/5, p.57
Purchasing agents' outlook, 4/7, p.79; 5/19, p.79
Recession, 1953-54 pattern, 4/14, p.103
Recession fight: Will you join us?, 4/28, p.55
Recession, how do you tell economic truth?, 5/19, p.92
Schellbach (Standard & Poor) speaks, 3/31, p.57
Senators on recession, 3/31, p.52
Slichter (Harvard): Editorial "Calling the Turn," 3/10, p.77; report, 3/10, p.97
Wickstrum (Sylvania) reports, 3/17, p.44

Business (Markets):
Abrasive shot, 4/28, p.65
Abrasive wheels, 1/27, p.47
Appliances, gas, 6/16, p.49
Appliances, long-term leasing, 6/23, p.57
Capital goods, 3/31, p.47
Chainmakers, 1/13, p.101
Components, 3/24, p.61
Construction, 2/24, p.35
Construction building costs, 6/2, p.37
Consumer durables, 6/9, p.55
Cutting tools, 2/17, p.84
Diecastings, 3/17, p.152
Do-it-yourself, 3/10, p.90
Electrodes outlook, 1/20, p.95
Extrusions, nonferrous, 4/21, p.183
Farm machinery, 6/2, p.46
Foundry equipment, 3/24, p.71
Furnace orders, 2/3, p.65
Galvanized sheets, 6/30, p.121
Gearmakers predict, 6/9, p.59
Helicopters, 3/31, p.54
Kitchen cabinets, 6/9, p.61
Machine tools, 3/10, p.73
Machine tools, (AMTBA report), 3/17, p.44
Machine tool trade squeeze, 4/21, p.57
Metalworking equipment, 5/26, p.68
Metalworking outlook (see Metalworking)
Numerical controls, 6/16, p.52
Oil field equipment, 5/26, p.67
Partmakers' outlook, 3/24, p.61
Photographic equipment, 4/14, p.89
Plastics, 1/13, p.41
Plastics, reinforced, 2/10, p.37
Plumbing fixtures, 2/10, p.47
Porcelain enamel, 6/16, p.50
Porcelain enamel, coated aluminum, 3/3, p.143
Powdered metal parts, 2/3, p.73
Power brushing, 2/24, p.40
Printed circuits, 4/7, p.66
Scrap prices barometer of business trends, 1/27, p.37
Scrap-aluminum prices change, 6/9, p.139
Scrap,exports fall, 6/16, p.133
Screwmakers, 6/9, p.60
Screw machine products, bellwether, 5/12, p.56
Stainless outlook, 5/26, p.151
Stampers, job shop, 6/2, p.105
Steel outlook (see Steel Industry)
Steel strapping, 3/17, p.129
Steel wire products, 6/23, p.127
Titanium sponge, 3/24, p.63
Tool and die shops, 2/10, p.45
Welding equipment, 3/10, p.81
Wire cloth, 3/3, p.59

Business & Defense Services Adm.:
'58 steel production outlook, 1/13, p.42
Budget funds, 1/20, p.42
Machine tool replacement market, 2/3, p.57
Machine tool surplus to schools, 5/12, p.50
Producers required to use ratings, 2/3, p.70

Business Machines: See Office Equipment

C

Cables:
Insulated cables, Youngstown Sheet & Tube, 5/12, p.92

Cameras: See Photography

Canada:
Approach to resources: Diefenbaker-U. S., 4/14, p.80
Depreciation plans, 4/28, p.58
NICB surveys markets, 2/17, p.85
Recession, 3/24, p.55
Saskatchewan steel mill, 4/21, p.85

Canmaking:
Market outlook (Stolk), 6/23, p.42

Canadian Steel Warehouse Assn.:
Organized, 3/3, p.88

Capacity:
Primary aluminum producers, 3/24, p.55
Steel, '57 review, 1/6, p.427
Steel ingots, Jan.-'58 and 1957, 2/17, p.184
Steel by '59, 1/13, p.42
Steel by '69, 5/19, p.80
Steel by '70, 6/16, p.41
Steel expansions, mid-Atlantic, 2/10, p.117
Steel ingots and castings, annual and monthly, 1/6, p.165
Titanium melting mill producers, 3/24, p.63

Capital Expenditures:
Capital outlay drop (Commerce Dept. breakdown), 3/31, p.41
New plant and equipment '57, 1/6, p.206
New plant and equipment '58 outlook (SEC), 3/17, p.45
New plant and equipment, STEEL survey, 6/16, p.47
Steel companies, '58 outlook, 2/10, p.37
Utilities spending, 6/16, p.41

Capital Goods:
Capital goods level off; Equipment makers see end of dip, 3/31, p.47

Capital Investments: See Financial

Capital Outlay:
Average investment per production worker, 4/14, p.87

Carbides:
Processing 310 stainless minimizes carbides, 1/27, p.73

Carbon Dioxide:
Lightweight gun speeds CO_2 welding, 6/16, p.118

Case Institute of Technology:
Operations research group, 6/30, p.60

Cast Bronze Bearing Institute:
Organized, B, 3/24, p.92

Casting, Castings:
Alloy casters see growth (conference), 5 26, p.120
Buyers get better castings, hot blast melt, 2 17, p.144
Ferrous castings stretch your dollars, 1 13, p.70
Gray iron castings, shipments, 1 6, p.169
Investment casting, carbon arc vs induction melting, 1 27, p.74
Investment castings go civilian; production news, 3 3, p.95
Shell molds add to steel's use, 3 24, p.70
Slip casting tech.; powder parts made without a press, 5 19, p.102
steel casting applications, blue ribbon ideas for cutting costs, 3 3, p.99

Census:
Census of manufactures, new data coming, 6 16, p.58
Farm population, 2 3, p.18

Chain:
Industry report, 1 13, p.101

Charts, Tables:
Finished steel distribution, '52, 3 10, p.164
Iron ore statistics: See Iron Ore
Jobless pay by states, 1 21, p.61
Metalworking earnings, 1st quarter, 5 5, p.54
Nuclear reactors, scoreboard, 1 13, p.17
office automation, who has, 1 27, p.40
Scrap consumption and stocks, 2 24, p.131
Space age metals, components and alloys, 5 5, p.86
steel, case for higher prices, (profits), 3 17, p.45
Steel imports by country of origin, 3 17, p.114

Chemicals:
How to test solvent quality, (Detrex), 1 13, p.86

Chem-Milling: See Machining

Chicago:
Realty investments gain, 3 31, p.67

Chromium:
Chromalizing diffuses into surface of metal; Process upgrades steel parts, 6 9, p.90
Stripped parts onto bumpers; ready for replating, 2 3, p.112

Clad Metals:
Brazed alloy clad strip, 2 10, p.81
Clad plates (Bustelloy), 3 31, p.100
Clad plate construction material (Channeled Hortonclad), 4 7, p.107
Laminating vinyl to steel sheets, 4 7, p.104
Pressure cladding, TO, 4 28, p.82

Cleaning, Blasting:
Check your shot equipment; cleaning costs, 6 16, p.54
Outsize blaster saves cleaning time, 4 7, p.106
Shotblast cuts costs (Rotoblast barrel); International Harvester, 1 14, p.112
Shotblast replaces pickling (steel coils and sheets); Midland-Ross, 3 10, p.136

Coal & Coke:
Bolt coal production, 6 16, p.41
We have plenty of good coking coal, 2 24, p.78

Coatings: See Finishes

Cobalt:
Cobalt is available; Where mined, U. S. consumption, 2 24, p.38
Cuban ores, 3 17, p.38

Coils:
Coil handling at Caine Steel; Stripper cuts costs, 1 27, p.78
See Heat Treating & Annealing

Coke Ovens:
Dofasco and North American Cyanamid, 2 3, p.65

Cold Working:
Cold forming rack used to roll splines in tubing, 6 9, p.94
Cold forms threads (tap), 5 12, p.100
Cold forging fasteners (bolts), 4 28, p.112
Cold heading components (bolts), 3 24, p.125
Flotturning missile nose (Explorer), 3 24, p.109

College-Industry:
Cleveland conference; Wheel-brator grant, 3 17, p.15

Color:
Stainless steel, Permyrom color process, 5 12, p.88

Columbium:
Columbium; Still on trial with metallurgists, 4 21, p.62

Communications:
Clark Equipment; Telegraph speeds delivery, 3 10, p.83
Vibracall, pocket size, vibrates signal for personnel, TO, 6 23, p.89
Weirton; organized for electronics, 3 24, p.112

Company Operations:
Clark Equipment; Telegraph speeds delivery, 3 10, p.83
Copperweld looks ahead, 2 10, p.52
Kropp Forge; 121 years of labor peace, 1 27, p.43
National Distillers; From whisky to metals, 3 31, p.55
Pesco Products; Automatic Warehousing, 5 12, p.55
Snyder Tool; Bank credit, financing aids small firms, 6 2, p.41
Solar Steel's Freedman sees evolution in warehouses, 2 17, p.83
Townsend sales philosophy, 1 20, p.45

Components:
1st quarter forecast, 1 6, p.185
2nd quarter inventory survey, 4 7, p.107
3rd quarter, part prices hit plateau, 5 19, p.85

Compressed Gas Assn. Inc.:
Elects, B, 2 10, p.74

Computers: See Counters, Computers

Construction:
1956 outlook, 1 6, p.169
AF Academy; steel roof, 2 3, p.65
Bolt for structural joints, high tension bearing, 3 31, p.82
Building bricks recession, 2 24, p.84
Building comeback, AGC report, 6 16, p.54
Building costs to climb, construction worker pay, 6 2, p.37
Chase Manhattan skyscraper, steel columns, 4 14, p.113
Chicago Loop skyscraper, 2 10, p.73
Housing in '58, 3 10, p.79
Inland building, movable interior walls, 3 10, p.89
Mackinac bridge, pic., dedication, 6 23, p.75
New Orleans bridge cantilever, 1 13, p.41
Tunnel Hampton Bays, porcelain ceiling, 6 9, p.87

Consumer Durables:
Industry report, forecast for hard goods, 6 9, p.55

Consumer Price Index:
Why price index rises, 3 31, p.41

Consumers:
Where steel consumers are (map), 1 20, p.46

Consumption:
Cobalt in U. S., 2 24, p.38
Lead-zinc, 1 6, p.179; 5 19, p.89
Pig iron, 2 24, p.131
Scrap, 2 24, p.131
Steel, how states rank in use; product groupings, 1 20, p.46
Steel, 11 states lead, 1 7, p.65

Containers: See Packaging, Containers

Contouring: See Machining

Controls:
See Gages
See Instruments
See Numerical Controls
See Production Control

Coolants: See Lubricants

Copper:
Article; Comeback for copper (Page at Phelps Dodge looks to electrical industry), 1 13, p.55
Consumption figures, 5 12, p.39
Copper-brass mill fabricator statistics, 1 6, p.178
Copper cakes 25-ft long, AS&R rolling mills, 1 7, p.120
Copper melting arc furnace, 2 10, p.100
Copper price on rampage, 6 16, p.156
Welding copper and its alloys, how to, 1 27, p.88; 2 24, p.90; 3 17, p.110; 5 5, p.106
Free world reserves, 1 13, p.36

Copper & Brass Research Assn.:
Elects, 5 26, p.93

Corporate Income:
Defined (U. S. Steel); Difference between replacing and depreciation cost, 3 24, p.63

Corrosion:
Carpenter Steel lab; New tools aid corrosion research, 6 23, p.98
Decorative platers use salt spray test, 6 9, p.102

Cost Crisis:
The cost crisis; How to beat it, 2 3, p.105
Editorials, 2 4, p.61; 2 10, p.41
STEEL's awards competition announced, 2 10, p.55, and deadline, 6 9, p.60

Cost Crisis Entries:
Alling-Lindler; Special machines cut gear costs, 1 14, p.136
AM&F; Welder fastener cuts cost of machine, 1 21, p.142
Blue ribbon ideas (steel casters), 3 3, p.99
Boost your machining speeds, 5 5, p.85
Brainstorming session; How to sell ideas to bosses, 4 7, p.71
Bushings Inc.; Reduced costs keep foundry competitive, 5 19, p.136
Chrysler; Two steps to heat treat savings, 6 16, p.101
Ipsen Corp.; Machine doubles up on grinding, 6 30, p.80
Engineers (Stewart-Warner, Evinrude, Rheem), 3 31, p.58
Gillette Safety Razor; Automatic assembly trims costs, 3 24, p.104
Gusset Boiler & Welding; Automatic welder saves 66 per cent, 2 24, p.72
Lamson & Sessions; Feeder slashes burnishing costs 95%, 2 17, p.140
Lockheed; Numerical control cuts cost, 6 2, p.67
National Supply; Tracer lathe replaces four machines, 4 28, p.98
Pandar Co.; Plating re-layout trims manhour waste, 3 10, p.124
Price of not re-equipping, 6 23, p.54
Production managers (Timken-Detroit, Jig Bushing, Buick), 3 3, p.95
Purchasing agents (Carrier, IBM, SPS), 3 17, p.17
Southern Gravure Services; Lathes trim finishing costs, 5 12, p.86
Thompson Pipe & Steel; New welder saves $150,000 yearly, 6 9, p.88
Thompson Products-Valve Div.; New layout ups output 10%, 5 26, p.100
Waterman-Waterbury; Electrostatic painting saves $11,000 in 3 months, 2 17, p.141

Cost Cutting:
ASTE show stresses cost cutting, 5 12, p.50
How plants will lower unit cost of manufacturing, 1 6, p.125
Trimming production costs; GE dc motor and generator dept., 3 10, p.144
Production control for profits, 3 17, p.83

Counters, Computers:
Aid inventory control, 6 2, p.36
Data processing, office automation, 1 27, p.40
Do you need computers? 5 12, p.56
Forge shop, production planning and scheduling, 3 17, p.88
GM computer tests free piston engines, 1 20, p.65

Credit:
Bank credit (see Financial)

Cryogenics:
New markets, 2 17, p.68

Cuba:
American business, 4 14, p.80
Nickel source (see Nickel)

Customer Service:
Heat treating stainless bars; Customers call the temper, 2 24, p.70
Modern warehouse evolution, management consultants to customers, 2 17, p.83
Weir-GE engineering course, 3 17, p.65

Cutting, Shearing:
American Gun's shearing line for plate and coils, 6 30, p.76
Billets scarfed six times faster, Kaiser, 4 14, p.132
Control on edge slitter (for tantalum foil) reduces waste, 6 23, p.104
Saw cuts bearing costs (band saw), 3 17, p.100
Scrap shear, pic., 3 10, p.82
Special machines (see Machining)
See Tools (Cutting)

Cutting Tool Manufacturers Assn.:
Elects, 3 3, p.88

D

Data Processing: See Counters, Computers

Debarring:
Deburring parts for small gasoline engines, 5 12, p.90
Deburring with ultrasound, 4 7, p.102
Vibration machine speeds finishing, 6 9, p.110

Decentralization:
GE program; Get set for the '60s, 1 27, p.35

Defense:
'58 budget; Industry tone, 1 20, p.35
'59 budget, 1 20, p. 12; mixed, 4 14, p.92; cuts seen, 4 21, p.61
'59 defense programs sought by Congress, 6 9, p.50
'60 limits; McElroy seeks allocation setup, 4 21, p.64
See ODM

Defense & Civilian Mobilization:
DPM-ECDA merger; Leo Hoegh heads, Gordon Gray new post, 6 30, p.41

Defense Contracts:
AF; missile div.'s opens small business office, 3 31, p.52
AMC; Mighty-Mite, Army, 1 7, p.55
Defense orders (McElroy report), 3 24, p.68
Defensework; Manage it for profit, 4 14, p.125
How to sell for defense, what to tell 'primes,' 5 26, p.61
Missile contracts placed, 1 27, p.66
Missile speedup would cut red tape, 2 3, p.63
Missile subcontractors (Table), 3 17, p.49
Missile subcontracting, five-point program (Avco's Inman), 6 23, p.42
Missiles, GFE vs. CFE, 4 7, p.68
Procurement figures, Defense Dept., 6 2, p.42
Space projects, 6 23, p.54
Titanium plant contracts, details, 2 10, p.37

Defense Production Act:
Extension asked, 1 20, p.42

Degreasing:
How to test solvent quality, 1 13, p.86
Infrared degreases license plates, 6 30, p.91

Depreciation:
Bold action, let's leap to recovery, 1 28, p.56
Bold action on depreciation; industry reacts, wants, 5 12, p.49; 5 19, p.95; 6 2, p.45; 6 16, p.57
Capehart bill for Bulletin F, 5 5, p.45
Capital equipment users demand reform, 6 23, p.58
Help on way (legislation), 5 26, p.62; 6 2, p.50
How to reform depreciation (Pelcubet and Barlow reports), 6 9, p.65
Railroad depreciation allowance, 1 27, p.32
U. S. Steel; Difference between replacing equipment and depreciation cost, called corporate income, 3 24, p.63

Used machine tool dealers hit inequities, 6 2, p.89
What depreciation does to your income (chart), 6 9, p.67
See Editorials

Descaling:
Strip descaled automatically, Midland-Ross, 3 10, p.136

Diecasting:
Diecasting sales down, 3 17, p.152
GMC bond, auto wheels to cost iron brake drum liners, 4 14, p.147
Vacuum diecasting for finishing aluminum, TO, 1 20, p.95

Dies:
Smart run dies, TO, 1 20, p.95

Direct Reduction: See Iron Ore

Distributors:
ASMDA sponsors TIS convention, 6 2, p.89

Distribution: See Warehousing, Distribution

Diversification:
National Distillers by metals, 3 31, p.5
Penn Precast, 3 17, p.55
Wheelabrator (How diversified on paper), 4 28, p.39

Dividends: See Stockholders

Do-It-Yourself:
Here's how, To crack do-it-yourself market, 3 10, p.99

Drilling:
Gun drilling, Deep holes drilled easily, 6 9, p.145
Gun drilling on turret lathe, 1 7, p.116
Power drill, heavy-duty, 6 23, p.101

Drives & Controls:
All-ac drive answers need (Varepack), 4 7, p.108
Drive for machine tools-constant horsepower, 3 14, p.154
Drives and controls, Yes, 1 6, p.124
Insulated cables save 50% at Youngstown's Campbell Wks., cold strip mill revamping, 5 12, p.92
Motor-machine tool combination handles metals, 1 27, p.42
Static switching catches on slab mill, 1 27, p.80

Dust Collectors & Filters:
Electrostatic precipitators aided by barbed wires, 3 10, p.148

E

Earnings: See Financial

Earthmoving Equipment:
Shipment, 1 6, p.186
Stripping shovel, pic., 3 3, p.58

Economy: See Business (Economy)

Editorials:
A New Look at Autos, 4 14, p.83
Calling the Turn (Slichter), 3 10, p.77
Challenges for 1958, 1 6, p.113
Cost crisis, who beats?, 2 3, p.61
Cost crisis competition, 2 10, p.41
Depreciation:
Let's Not Compromise, 6 9, p.53
Model T in Space Age, 5 5, p.49
Modernization: We Need a Tax Break, 6 2, p.33
Reform Too Little, Too Late, 6 23, p.45
Share in Pricing, 6 16, p.45
Tomorrow Expendable tooling, 5 12, p.43
Get Set for the Sixties! 1 27, p.35
How High is Unemployment? 4 7, p.59
Let the Public Know (role of business and industry in economy), 2 17, p.41
Let's Think Clearly, 2 24, p.33
No Time to Read? 3 31, p.45
Paradox in Paradise, 4 21, p.55
Road to Socialism (Reuther's proposals), 3 3, p.51
Russia's goal: The World, 6 30, p.47
Selling in Europe, 5 19, p.83
Take Lid Off Spending, 3 24, p.59
Tapping the Missile Market, 1 20, p.33
Three Steps to Profit, 1 13, p.33
Time Well Spent (community activities), 4 28, p.53
What Price Free Trade? 2 17, p.71

Electric Motors: See Motors & Generators

Electric Power:
Direct generation, possibilities of future, 2 17, p.85
Fuel cell to supplement selectric power, TO, 3 10, p.121
Kennecott Copper boosts power, 2 17, p.76
Utilities new plant spending, 6 16, p.41
Utilities (Ohio) plan construction, 4 21, p.52

Electrical Equipment:
Ceramic-coiled wire, 6 30, p.79
Copper-clad telephone wire plated continuously, 3 24, p.118
See Drives & Controls

Electrical Steels:
Electrical strip steel new, 6 23, p.107
How to choose and improve them, 6 9, p.116

Electrodes:
1958 industry outlook, 1 20, p.95
Barbed wire electrodes for precipitators cuts dust, 3 10, p.148
Roller electrode for tubular jobs, 3 31, p.74
Spark electrode, hardening treatment, TO, 6 2, p.95

Electrolytic Grind:
Abrasif grinding wheels cuts tool costs, 6 2, p.72

Electronics:
Electronics scales new ways to use, 2 17, p.124
Household electronic centers "predicted," 4 21, p.52
Industry report, 3 31, p.121; 6 2, p.58
Western Ore-tyzer for electronics, 3 24, p.112

Electrons:
Electron beams particles (Boys), 3 24, p.108

Electroplating, Plating:
Auto bumpers: Stripped parts are ready for replating, 2 3, p.112
Conductor (telephone) wire plated continuously, 3 24, p.118
Decorative platers, salt spray test, 6 9, p.102
Electrodes, plating, chemical deposit, 6 2, p.77
Electroless plate for magnesium, TO, 6 9, p.97
Nickel "Microgram" rigid but flexible on plastic sheet, 1 28, p.115
Plater unloads automatically (door hinges), 2 24, p.83
Plating helps titanium, 5 5, p.102
Platinum plate, pore-free process, TO, 5 26, p.99
Plating re-layout trims manhour waste (Parker), 3 10, p.124
Removes metal oxides before plating, TO, 5 26, p.99
Tips for users of plated steel, 1 14, p.157

Electrostatic Painting:
Saves $11,000 in 3 months, Waterman-Waterbury, 2 17, p.141

Electrostatic Precipitators:
Barbed wire cuts dust on precipitators, 3 10, p.148

Employment, Unemployment:
Editorial: How high is unemployment? 4 7, p.59
Employment patterns, 1 14, p.79
Layoffs, how to handle, 2 3, p.65
Metalworking employment, 1 6, p.198
Total U. S. employment, 1 6, p.196
Unemployment figures, 3 17, p.50
See SUB
See Unemployment Compensation

Engine Bearings:
Aluminum-on-steel: These bearings don't wear out, 1 20, p.82

Engineering:
McDowells report Europe seeks our engineering knowhow, 3 3, p.57
Wean-GE course, customer-supplier relations, 3 17, p.45

Engineers:
Average starting salaries, Lehigh Univ. grads, 6 30, p.44
Enrollment, graduates, 2 3, p.58
Enrollment up, 3 3, p.58
Handle engineers carefully, 1 21, p.97
How engineers can beat the cost crisis, 3 31, p.58

Expanded Metal:
Expanded metal for paint tray, 1 27, p.92

Expansions:
Nonferrous companies, 6 16, p.156
Steel mills, mid-Atlantic area, 2 10, p.117
Virginia steelmaking facilities, 1 13, p.11
West Coast "growth" area, 5 5, p.54
West Coast steel mills, 3 24, p.80
See Plant Expansions

Epoxys: See Plastics

Equipment: See Metalworking

Etching:
Dramatic etching, Convair's automated chem milling, TO, 6 2, p.96

Europe:
Articles by Irwin Stoll (STEEL goes to Europe):
Germany eyes recession, 3 17, p.48
France fears inflation, GNP, 3 26, p.90
Italy's steel downshadily, 3 19, p.90
German firm is prosperous (wiring c., p.38)
Belgian production high, 4 7, p.56
Russian tour, 6 16, p.48; 6 23, p.48; 6 30, p.54
Euromarket stirs business, 3 10, p.74
European steel rising output, import, 1 27, p.105
European Steel to inquire (on finished steel production), 4 21, p.56
Europe still leading (How European Communities work), 3 17, p.50
Fringes in Europe's costs (Wilkinson-McGill Mfg. reports tour), 3 10, p.80
See Foreign Trade

Executives: See Management

Explosives:
Shock hardening metal, TO, 6 2, p.95

Exports, Imports: See Foreign Trade

Extrusions:
Doehler-Jarvis cold extrudes tail-gate ornaments of Cadillac's grille, 2 17, p.87
Extruded shape cuts costs (sprockets not extruded, cold drawn), 4 14, p.157
Extrusion slashes wheel assembly costs (Ford coupe with Steel Improvement), 5 5, p.88
Glass heat bath before extrusion, TO, 3 24, p.103
Extrusion market grows, shipments, 4 21, p.183

F

Fabrication & Assembly:
Auto frame project teams at A. O. Smith, 1 21, p.71
Automatic assembly moves ahead (Ford hardware plant), 3 3, p.120
Automatic assembly trims costs, Gillette, 3 24, p.104
Boost for assembly: Strippit pierce nut unit, 6 2, p.83
Extrusion slashes turbine wheel assembly costs, 5 5, p.88
Fabricating the Redstone missile (Reynolds), 1 20, p.96
Grid layout cuts hole punching time, 2 3, p.130
Machine cuts air conditioning duct costs, 2 3, p.125
Paste solders automate assembly, caps to speaker magnets, 6 2, p.68
Press for precise assembly (Frigidaire), 5 5, p.108
Presses speed assembly: Securing of rivets in cabinet hinges, 6 30, p.96
Steel fabricating plant built by Dutch industrialists, 3 17, p.75
Tackwelding motor bearing brackets before boring: Makes most of machine time, 2 10, p.95

Farm Equipment:
Industry report, machinery, sales, 6 2, p.46
Sales, 1 6, p.110
Shipments, 1 6, p.196

Farm Equipment Institute:
Elects exec. sec'y, 5 26, p.96

Fasteners, Fastening:
Bolt (nine foot forging) is automo. sl, 1 27, p.87
Bolt for structural joints, spirally knurled body: This bolt holds better (Lamson & Sessions), 3 31, p.82
Bolt holds presses, self-locking nuts and screws, 3 17, p.98
Bolt torquing, how tight" To, 3 3, p.95
Cold heading better, 3 24, p.125
Cold forged bolts, 4 28, p.112
HRM assembly, Jig Setter, screw feeding equipment, automatic, 4 21, p.149
Metal powder fasteners, TO, 1 27, p.71
Rivets secured in cabinet hinges: Presses speed assembly, 6 30, p.96
Socket screw-fitting equipment, sales, 6 9, p.60
Stirrup pierce nut unit, boost for assembly, 6 2, p.83
Tapping screw tips, 3 24, p.87
Welded fastener cuts cost of machine, 4 21, p.112

Financial:
Capital investments, revisions of for good future, 3 24, p.74
Corporate income of U. S. Steel definition, 3 24, p.63
Dividend policies, NICB survey, 2 24, p.26
Earnings outlook for '58, 2 10, p.45
GNP for '58 forecast, 3 24, p.66
Metalworking profits (selected firms), 2 10, p.43
Metalworking profits, 1st quarter, 5 5, p.61
Metalworking profits-sales, material outlook, 6 30, p.62
Nonferrous profits, 1st quarter, 6 9, p.148
Steel-iron, 1st quarter revenue, 6 23, p.51
Steel earnings (company), '56-'57 comparison, 2 3, p.57
Steel profits (selected firms), 2 10, p.43; 5 5, p.51
Steel sales and profits, Fitzpatrick analysis insert, 3 31, p.59
Stockholders (see)
What depreciation does to your income, 6 9, p.67

Financing:
Bank credit aids small firms, 6 2, p.41
Bank loans, now's the time to borrow, 2 3, p.74
Modern warehouse role, customer service, consultants, 2 17, p.84

Finished Steel:
1957 weekly index of prices, 1 6, p.174
Distribution by market classification for 1957, 3 10, p.164
Distribution (1954-57), 1 6, p.167 (1956-57), 2 17, p.179

Finishes, Coats, Paints:
Aluminum-clad wire, 5 12, p.100
Aluminum plant exterior lacquer-coated, TO, 1 27, p.71
Chevrolet anodizes aluminum grilles, 1 14, p.19
Coated abrasives advance, 6 30, p.92
Coatings based on soybean and linseed oils, TO, 5 12, p.95
Du Pont one-shot finishing, TO, 6 16, p.97
Electrostatic spray painting: Saves $11,000 in 3 months, 2 17, p.141
Hot paint improves spray, red lead, 2 17, p.139
Ingot mold coating (Alba), TO, 6 23, p.89
Mechanized conveyor finishing (Hoffman Eng'r), 6 23, p.93
Missile coatings, 4 28, p.109; 6 23, p.89
Molybdenum deposited by vapor process, 6 30, p.96
Paint tray of expanded metal, 1 27, p.92
Plastic-coated metals, uses, 4 7, p.104
Porcelainized aluminum, markets, 3 3, p.143
Prepaint phosphate coat bonded to sheet metal, cold cleaner aids, TO, 5 19, p.135
Roller coating for drapery rods, painted before forming, 6 16, p.121

Sprayed metal on bearings, 6-2, p.66
Water-base primer for car bodies, TO, 5-12, p.85
Water glass coatings during heat treatment (Boeing), 6-23, p.100

Fire Equipment:
Mill uses firetrod hydraulic fluid (Allen Wood), 2-3, p.117
Sprinklers save insurance dollars, 2-24, p.86

Flame Cutting:
Electronic eye guides flame cutter accurately, 5-26, p.111

Fleet Leasing:
Company cars: Should you lease or buy? 2-10, p.48

Flexturning: See Cold Rolling

Flux:
Fluxing speeds before brazing, 6-16, p.110

Foil:
Thin zirconium foil for fuel bodies, 6-9, p.66

Foreign Trade:
Atoms foreign market, 1-27, p.44
Ex-Im sets tariff, 3-3, p.50
Export-Import Bank loans, brief, 3-3, p.50
Foreign competition grows, 1-6, p.126
Machine tool buyers hit trade policy, 7-21, p.37
Markets rise for private investors, 3-24, p.76
Reciprocal Trade Agreements Act extension approved, 2-3, p.70; effect on, 1-27, p.37
Scrap exports fall (countries buying from U. S. 6-16, p.110)
Selling in Europe reformed, 3-17, p.58
Steel imports (by country of origin), 1-27, p.114
Steel industry wary steelmaker), 1-27, p.106
U. S. Imports, a warning, 3-17, p.61

Foremen:
Supervisor pay, foremen and offices, 4-14, p.99

Forging:
Bolt forging automated (horizontal upsetters), "Built to Hi Acme for Bethlehem, 1-27, p.83
Forging press designed for use parts (Erie Forging), 3-17, p.108
Stainless forging takes precise control, 6-9, p.92

Forming, Bending:
Bend test machines, 2-3, p.114
Bending machines form, precision parts, 2-10, p.79
Flotturning: Forming the Explorer's (missile) nose, 3-24, p.106
Forming rack: Tool cold rolls splines in tubing, 6-9, p.94
Hot forming titanium, resistance heated, 3-3, p.109
Press flexibility boosts output (telephone equipment), 3-10, p.128
Roll forming gets an assist, GE turbine blades, 6-2, p.70
Pipe cold forms threads, 5-12, p.100

Foundries:
Automated foundry is flexible (Switzerland), 6-16, p.98
Carbon arc vs. induction melting methods for investment casting, 1-27, p.74
Ferrous castings stretch your dollars (Article based on Engineered Castings Seminar-GE), 1-13, p.70
Foundries limit buying (industry report), 3-24, p.71
Incentive plan pays off (Slick-Horner), 6-2, p.40
Induction furnace for melting nonferrous: Reduced costs keep foundry competitive, 5-19, p.136
Superior Foundry: Hot blast melting improves castings, 2-17, p.144

Foundry Educational Foundation:
Elects, B, 3-31, p.76
Founders, objectives, grant from Wheelabrator, 3-17, p.45

Freight Cars, Freight Rates:
Mills pay more freight, how equalization operates in Philadelphia area, 4-14, p.191

Fringe Benefits:
Check your fringe costs, 5-5, p.62
Europe's fringe ups costs, 3-10, p.89

Fuels:
Aluminum clad fuel elements for reactors, TO, 6-2, p.65
Cryogenics (gas), new markets, 2-17, p.68
Fossil fuel short of demand (coal, coil, gas), 2-17, p.68
Gas analysis for open-hearth firing unburned fuel, 5-26, p.105
Gas atomizes open-hearth fuel, 4-14, p.111
Jet fuel-air mix for high-temp. vapor lube, TO, 6-9, p.87
LP gas gains, 5-12, p.39
Metallic fuels become vital, 4-14, p.95
Solid fuels for missiles, 1-20, p.29; 3-3, p.48
Solid fuels for missiles, aluminum additives, 3-17, p.37

Furnaces, Ovens (Heating, Heat Treating):
Automatic lines: 18 ways to move parts in a furnace, 6-23, p.90
Continuous annealing furnace for 5-in. tube, 1-20, p.74
Copper melting arc furnace starts up, 2-10, p.100
Direct fired coil annealing furnaces, 5-12, p.91
Electric furnace steel conference, 1-13, p.81
Electron beam melting furnace, 3-24, p.105
Furnish Was: One furnace does three jobs, 3-24, p.74
Infrared degreases license plates, 6-30, p.91

G

Gages:
Air gage checks gears, hub, 6-9, p.114
Gage cuts cut setup time, 4-28, p.102
Gage control for cold strip reduction mill, J&L, 4-7, p.110
Gage test for magnetic chucks, gripping power, 4-14, p.150
Grinding control and feed system ("Inchworm"): Control to 50 millionths, 3-24, p.110
Grinding tolerances: Millionths made easy, "Ceda Size" and "Electromate", 5-19, p.148
Railroad track alignment job (missile testing), 6-9, supersonic rocket sleds, 3-17, p.99
Sheffield "print-out" system, 4-21, p.119

Galvanized Sheets:
Industry report, 6-30, p.121

Gas:
See Fuels
See Steelmaking (openhearth)

Gas Appliance Engineers Society:
Elects, B, 5-12, p.82
Industry report, 6-16, p.49

Gears:
Industry report, 6-9, p.59
Special machines cut gear costs, 4-14, p.126

Germany:
August Thyssen-Hutte mill: Steelmaking German-American style, 3-10, p.130
Demag, A. G., Duisburg, firm prosperous, 6-2, p.39
Germany escapes recession, Dr. Erhard reports, 5-12, p.48
German steel dips: Such interviews Dr. Winkhaus, Dr. Pohle, 5-5, p.56
Recession, exports dip, 4-7, p.65

Glass:
Glass covered magnet wire, 5-12, p.100
Glass tubes form cores in high temp. metal parts, 6-23, p.95
Pyroceram resists heat, 4-7, p.101
Water glass solves heat treat problem, 6-23, p.100

Government:
1958 legislative outlook, 1-6, p.130
Antitrust:
AMC's Romney before hearings, 2-17, p.88
FTC consent decrees examined, 4-7, p.68
Kefauver bill S.11, 3-10, p.86
Bills coming up, 1-20, p.30; 6-30, p.56
Budget for '58: Industry tonic" 1-20, p.35
Budget '58, 1-13, p.29; congressional reaction, 1-20, p.42
Budget, 1960's will prevail, 3-24, p.68
Budget-foreign aid, 4-28, p.64
Businessmen in government report, 5-26, p.64
Defense contracts, government's policy, 3-17, p.50
FTC merger actions, 1-27, p.49
Flanders (Sen.) defense policy, 6-23, p.54
Gas rate ruling for Memphis case, 5-19, p.79
Highway Act: pay-as-you-go interstate system 1961, 4-14, p.92
Highway bill, comments, 4-28, p.62
Hoover bill defense funds on annual nonmet expenditure basis, 2-24, p.42
Humphrey amendment to trade act, 3-17, p.37
Humphrey new fair trade bills, 6-2, p.42
ICC: Scrap dealers charge discrimination, 2-10, p.50
Knowland loses fight for labor laws, 5-5, p.58
Labor costs, (NILB report), 1-27, p.41
Labor law recommendations (McClellan Committee), 2-31, p.81
Labor mediation service (FMCS), Finegan on, 1-20, p.40
Labor relations cases, Supreme Court shoot-fires, 6-9, p.49
Loan rates may rise, 1-20, p.42
Loan discount rates lowered (FRB), 1-27, p.32
Merger bill (Rep. Celler), 1-27, p.48
Merger trends, 4-21, p.51
Mills bill, small business, 5-5, p.55
Mills bill (depreciation) on way, 5-26, p.62
Mines Research Inst. sought, 1-27, p.44
Miners subsidy, 6-16, p.42
Missile program cut, 2-24, p.42
Missile programs, appropriations, 6-9, p.62
Missile-space agency replaces NACA, 4-14, p.92; 6-9, p.62
Missile-space agency (research) headed by Johnson (GE), 2-17, p.58
Public works program, 3-3, p.60
Putman recommendations, 3-10, p.86
RFC "rebirth", 2-24, p.29
Railroads aid, Smathers' subcommittee" recommendations, 6-2, p.47
Railroads, Congressional aid? 6-23, p.47
Reciprocal Trade Agreements Act, extension in doubt, 2-3, p.70; 5-26, p.64
Rivers and harbors bill, 1-13, p.42
SIC classifies census of manufacture data, 6-16, p.58
Seaton bill for metals, 5-5, p.55
Seaton bill opposed, 5-12, p.47
Seaton backs copper stockpile, 6-16, p.42
Scientists and engineers committee: Dr. Walker report 2-3, p.70
South American relations, 5-26, p.64
Submarine program, 1-20, p.29
Tool industry, Justice Dept. O.K., 2-17, p.80

Gray Iron Founders' Society Inc.:
Gray iron castings handbook: C. F. Walton, 2-24, p.107

Great Britain:
Steel prices cut, 4-7, p.56; 4-14, p.90
Steel production high (plants), 6-9, p.59

Grinding & Polishing:
Abrasive belts cut roll grinding costs, 3-31, p.92
Anocut electrolytic grinding (Ryan): Fine grind cuts tool costs, 6-2, p.72
Gage Controls:
Control to 50 millionths "Inchworm", feed system on centerless grinder, uses Magnetostriction, 3-24, p.110
Millionths made easy "Ceda Size" for time feed, and "Electromate" for mating parts, 5-19, p.148
Machine doubles up on grinding (Dana): Two diameters of differential shafts at one time, 6-30, p.80
Rotary surface grinding automatic (Heald), 6-30, p.84

Guides:
Tool steels and carbides, 4-21, p.97, addition, 5-5, p.89

H

Hard Facing:
Plate Mill: Hard facing adds to guide life, 6-23, p.96

Hardening: See Heat Treating

Hardsurfacing:
Hardsurfacing heavy duty field equipment, 4-28, p.103

Hardware Merchants & Manufacturers' Assn.:
Elects, 2-3, p.100

Harvard University:
Shichter address AIC, 3-10, p.77; and p.97

Hawaii:
Bauxite deposits, 2-10, p.50
Steel mill, 4-7, p.56; 6-2, p.62

Heat Treating & Annealing:
18 ways to move parts in a furnace, automated lines, 6-23, p.90
Chrysler: Two steps to heat treat savings, 6-16, p.101
Coil drying speeded by trucks (Carpenter Steel), 5-19, p.146
Coils opened for annealing (Lee Wilson), 4-28, p.104 and 5-19, p.111
Continuous annealing on a grand scale (Weirton tin plate strip lines), 1-20, p.74
Direct fired coil annealing revives, 5-12, p.91
Harder stainless practical with nitriding, 6-30, p.85
Heating technique minimizes distortion (hardening gas turbine parts of Chromalloy), 5-26, p.102
Incoloy heat treating baskets, 3-31, p.86
International Harvester: One furnace does three jobs, 3-24, p.74
Processing 316 (stainless), millmarks, carbides, 1-27, p.42
Sleeve for annealing furnace made of Hastelloy X, 6-23, p.107
Stainless steel bars: Customers call the temper, 2-24, p.75
Waterglass coatings solve heat treat problems for reactive metals like titanium and zirconium (Boeing), 6-23, p.100

Heavy Presses:
Reynolds operates Loewy press for Navy, extrudes aircraft shapes, 3-3, p.81

Helicopters: See Aircraft

Helium:
Recovery plants scheduled, 5-12, p.52

Highway Program:
Highway Act, pay-as-you-go interstate, 1961, 4-14, p. 92
Highway bill comments, 4-28, p.62
Timetable for interstate system: Slow going until '60s, 2-17, p.73

Hoist Manufacturers Assn. Inc.:
Elects, B, 4-14, p.122; 4-21, p.93

Home Manufacturers' Assn.:
New name, 4-28, p.91

House Organs:
Business conditions outlined, 2-3, p.69
Kropp Forge "Village Blacksmith", 1-27, p.43

Housing:
Air conditioning, FHA boost, 4-7, p.68
Electronic centers, predicted, 4-21, p.52
Housing: How much help? 3-10, p.79
Prefabs boom, 4-7, p.65; 5-12, p.40
Revival takes hold, 3-24, p.68
Solar heating, 4-21, p.63
Vet loans extended, 4-7, p.55

Hydraulic Institute:
Elects president, 2-24, p.66

I

Illinois Institute of Technology:
Armour appoints Dr. Read, B, 6-23, p.86
Armour licensing aid, 2-24, p.47
Levinson, asst. mgr., metals, 3-3, p.88

Incentives:
New incentive plan pays off (Slack-Horner Brass Mfg.), 6 2, p.40

India:
India plans steel capacity growth, 6 2, p.40

Induction Heating:
Carbon arc vs. induction melting, 4 28, p.74
Installing induction furnace aids foundry cost cutting, 5 19, p.136

Induction Hardening:
Monroe Auto production line for shock absorber shafts, 3 10, p.141

Industrial Development: See Area Development

Industrial Furnaces:
Industry report, 2 3, p.65

Industrial Heating Equipment Assn., Inc.:
Elects, 2 17, p.105

Industrial Relations:
Managers' relations with engineers: Riegel (U of Mich.) study, 4 21, p.67

Inserts:
Financial analysis of steel industry, 3 31, p.55

Inspection, Testing:
Analysis (carbon, sulfur, phosphorus): Spectrometer, 6 2, p.72
Boroscope for inaccessible areas, (Convair), 5 19, p.163
British microscope, surface measurement, TO, 3 10, p.121
Control to 50 millionths (Inchworm) on centerless grinder, 3 24, p.110
Electron device monitors strip gauge in slitter, 6 23, p.104
Fluoroscope checks castings, TO, 1 13, p.69
GM computer tests free piston engines, 1 20, p.65
Gauge test for magnetic chucks, 4 14, p.156
Gamma Ray guardian for coke oven, TO, 3 24, p.103
Infrared pyrometer controls heating of titanium, 2 3, p.130
Isotopes: Industry's new work horses, 5 12, p.104
Machine tool pilot runs, 2 10, p.92
Nondestructive testing, progress report, 6 23, p.110
Plating salt spray test, decorative plate, 6 9, p.102
Solvent degreaser control tests, 1 13, p.86
Static control on sparking assembly machine, 4 7, p.128
Tubing weld tests underwater ultrasonic job at B&W, 1 20, p.72
X-ray films, silver content, surveyed, 4 14, p.142

Institute of Scrap Iron & Steel Inc.:
Elects, 2 10, p.74
Meet in Fla.; Scrap prices barometer of business trends, 1 27, p.37

Industrial Diamond Assn. of America Inc.:
Elects, B, 6 23, p.86

Instruments:
See Inspection, Testing

Internal Combustion Engine Institute:
Elects, B, 5 12, p.82

International Society for Industrial Marketing:
Possible outgrowth of NIAA, 3 31, p.42

Inventories:
Are your inventories right? Good balance helps (ABC Co. appraisals), 6 2, p.35
Auto inventories hold sales key, 6 2, p.49
Components: Inventory reduction grinds to halt, 4 7, p.137
Customer inventory-steel, 4 14, p.79
Inventories: Recovery's key (Palmer-Carpenter Steel), 5 5, p.57
Inventories trouble, NICB survey, 6 9, p.50
Metal inventories, 2nd quarter forecast, 2 3, p.159; 3rd quarter, 5 5, p.125
Oil field equipment, inventories force slowdown, 5 26, p.67
Steel: Midyear pickup possible, 4 28, p.155

Inventory Control:
Computers and inventory control, 6 2, p.56
Whitney chain marketing methods product planning, 3 24, p.72

Iron:
Find white-hot iron under pressure below earth surface, TO, 5 24, p.24

Iron Ore:
Brazilian ore fields acquired by Hanna, 3 3, p.56
Canadian deposit, Kingston, Ont., 3 3, p.97
Canadian deposit (Que.), Lake Normand, 3 31, p.42
Direct reduction: Krupp-Renn, marketed, 4 28, p.100
Direct reduction, H-N, 3 17, p.102
Direct reduction, Strategic-Udy, 4 7, p.56; advantages, 4 21, p.104
Imports—1957-58 chart, 4 28, p.142
Iron ore statistics, 1 20, p.163; 2 10, p.120; 3 10, p.172; 4 14, p.188; 5 12, p.126; 6 9, p.143
Italy has deposits in Portuguese Union (Goa), 5 19, p.91
Kiln beneficiation, TO, 5 26, p.99
Iron ore stocks ample, 3 24, p.145
Missouri Ozarks deposit, 2 10, p.38
Russian shortage eyes East, 1 20, p.38
Russian source Urals; Carney reports visit to Russia, 2 3, p.129
Taconite processed by magnetic separation, outlook, TO, 4 14, p.135

Isotopes:
Isotopes: Industry's new work horses, 5 12, p.104

Italy:
Italian steel outlook, 3 10, p.90

J

Japan:
Red China ships steel products to Japan, 3 24, p.73
Shipbuilding, 2 3, p.58

Jet Engines:
See Aircraft
See Alloys

Jigs & Fixtures:
Track rack rollers ease handling, 5 26, p.117

Job Shops:
GE automates job shop; small ac motor and generator dept., 1 27, p.48
GE-Kidar reports small lot automation is here, 3 24, p.126
Job shop quality control (Westinghouse-atomic fuel dept.), 4 14, p.79

K

Kitchen Cabinets:
Cabinet sales, 6 9, p.61

L

Labor:
1958: More labor mediation, collective bargaining, 1 20, p.10
1958?: What's happening: labor roundup (except auto), 5 19, p.87
AFL-CIO shaping '58 policy, 2 17, p.67
Aircraft demands, 3 3, p.47
Aircraft settlements, 6 9, p.49
Auto-UAW:
Profit sharing (GM example); Why UAW shifts demands, 1 20, p.39
What'll Reuther sign for? GM-UAW Council, 2 3, p.68
UAW pushes severance pay and job transfer rights, 2 24, p.37
Auto talks get rolling: How to measure productivity, 3 31, p.49
Auto talks proceed: Key issues take shape, 4 14, p.85
Compromise one year pact? Reuther demands, company offers, 5 5, p.52
Bargaining solidarity among auto firms, 5 12, p.40
Editorial (Road to Socialism), Reuther proposals, 3 3, p.51
Stalemate without contracts, rally to Reuther, 6 9, p.57
Pact by Sept.?, 6 30, p.43
Building a labor contract (management series), 5 19, p.125
Building trades pact, 2 24, p.30
Clerical worker drive, 1 13, p.29
Collective bargaining outlined (Rattenberg report, former steelworkers leader), 2 17, p.78
Cutting labor costs; NICB meeting report, 1 27, p.41
Electrical workers spokesman, language hit, 6 9, p.49
FMCS (mediators), 1 20, p.10
Fringe benefits, management guideposts, 5 5, p.62
Fringe benefits (Europe), 3 10, p.88
Labor contracts (Cleveland), 6 23, p.41
Labor pacts signed by GM, Ford, 6 23, p.41
Layoffs, how to handle counseling helps, 2 3, p.69
Machinists demands on Lockheed, 1 20, p.29
Maritime Trades may organize, 3 3, p.48
McDonald eyes re-election, steelworkers poll, 6 16, p.41
Musicians-Moline and UAW bargaining pact, 4 7, p.97
NLRB reverses policy; union not in compliance with 7H, 6 9, p.49
Oil, chemical union seek oil royalties fund, 1 20, p.29
Right-to-work bill, Knowland loses fight, 5 5, p.58
Right-to-work eight states, 6 16, p.42
Right-to-work, State legislatures, 4 21, p.52
Short work week demand dropped by Reuther, 1 20, p.39
Short week may come gradually, 3 31, p.42
Skilled workers how to NLRB, 6 23, p.62
Skilled workers union, elections, 3 31, p.60
Skilled trades file petitions, Chrysler, 4 14, p.85
Sheffler—Improving labor policies, 1 7, p.58
Steelworkers aim at valve, pump makers, 3 31, p.42
Strikes (chart), Frequency and effect 1946-57, 5 5, p.61
Strike fund: UAW, 2 3, p.68
Strike losses '57, 1 13, p.29
Strike odds, automotive, 3 10, p.94; 5 19, p.75
Supreme Court absolutizes on labor relations cases, 6 9, p.49
Teamsters-Hoffa president with advisers, 2 3, p.58
Tool and die contracts, Chicago, 6 30, p.43
UAW demands, 5 5, p.45
Unfair labor charges soar, 5 12, p.49
Union membership dues? 3 3, p.47
Welfare funds legislation, 4 21, p.92
Whitecollar drive to resume in '59—60, 3 24, p.65

Laminates: See Plastics

Layoffs: See Unemployment

Layout Table:
Grid layout cuts hole punching time, 2 3, p.130

Lead Industries Assn.:
Convention, look at markets, 4 28, p.66
Elects, B, 4 28, p.94
Lead-zinc research with overseas pioneers, 2 10, p.140

Lead-Zinc:
Hit by USDA restrictions, barter program?, 5 19, p.220
Lead-zinc research aims to boost uses, associations, 5 19, p.88
Senton bill for metals presented, 5 5, p.55

Leasing:
Applications, long-term consumer leasing, 6 23, p.57
Capital equipment, 6 2, p.29
Company cars: Should you lease or buy?, 2 10, p.48
Machine tools and metal forming equipment, 3 3, p.63
Machinery rentals: New lease on life?, 4 14, p.86

License Plates:
Infrared degreases license plates, 6 30, p.91

Licensing:
Licensing: A road to profit, 2 24, p.46
More foreign licenses, 3 24, p.67

Lighting:
Outdoor lighting fixture cheaper due to stainless wire thread inserts, 6 23, p.107

Lithium:
Aluminum-lithium alloy for aircraft, TO, 5 26, p.99
Filler metal for high temp., 5 19, p.149

Loans:
Bank loans, now's the time to borrow, 2 3, p.74
Bank credit aids small firms, 6 2, p.41
FHB lowers discount rate, 1 27, p.32

Lubricants, Lubrication:
Coolant recovery plant, Kaiser, 5 26, p.161
Forging lubes, Battelle report, TO, 4 14, p.135
Hot lubricants, synthetic loses, TO, 6 2, p.65
Missile lubricant, TO, 1 27, p.71
Vapor lube, AF, TO, 6 9, p.57

M

Machine Tool Industry:
1958: The tool outlook (STEEL survey), 2 3, p.67
ASTE show stresses cost cutting (exhibitors), 5 12, p.54
Builders hit trade squeeze ask Congress for tariff revision, 4 21, p.67
Bulletin F Carehart bill introduced, 5 5, p.45
Cutter abrasives advance, 6 20, p.92
Compare (sponsors) quest for optimum machining, 6 16, p.115
Depreciation (See)
Government tools (see OEM)
How we buy machine tools (GE steam turbine generator dept.), 4 28, p.116
Machine tool orders, 3 10, p.73; outlook poor, 4 21, p.119
Mitch' & Merryweather show scheduled, 5 19, p.110; reported, 6 16, p.110
Numerical controls (see)
Pilot runs: Better odds for the buyer, 2 10, p.92
Planned obsolescence, Ireyfus report, 3 3, p.48
Price of not-to-requipping, 6 23, p.58
Re-equipment market: Boline reports, 3 31, p.47
Replacement market, 2 3, p.57
Schools get surplus tools, 5 12, p.56
Shipments, 1 6, p.182
Tale of million dollar turret lathe, 4 28, p.96
Used tool dealers hit inequities (surplus/government-owned tools and depreciation favors), 6 2, p.80

Machine Tools & Attachments:
Bandsaw cuts bearings, 3 17, p.100
Billet scalper (Kaiser), 4 14, p.152
Boring machine, job in 32 seconds (Chance Vought), 3 10, p.142
Boring machine, motor housing brackets, 2 10, p.96
Checking springs grip hot finished tubing, 2 24, p.87
Contour-Matic, 5 12, p.60
Control to 50 millionths on centerless grinders (Inchworm), 3 24, p.110
Disposable cutters, key to, 2 17, p.126
Disposable cutting tips and optimum machining speeds: GE machinability program cuts costs, 3 10, p.144
Drive delivers constant horsepower, 4 14, p.154
Feeder slashes burnishing costs 96%, 2 17, p.110
Grinders finish piston pins, 2 10, p.92
Lathes trim finishing costs, 5 12, p.86
Motor-machine tool milling machine (Allis-Chalmers and Ekstrom-Carlson), 1 27, p.42
Multiple-spindle automatic complexities, 6 16, p.113
Profiling machine (Lockhart), numerical controls, 3 10, p.141
Special lathe whips spiral cutting, 1 27, p.77
Special machines for gear cutting, 4 14, p.136
Specials: Family of specials tackles short runs, 3 17, p.96
Tap swages thread, 2 10, p.92
Throwaway cutters boost speeds, 5 5, p.85

Tracer lathe replaces four machines, 4-28, p.98
Transfer machine shapes car wheels, 6-16, p.108
Turning machine for railroad wheel finishing, 5-19, p.128
Vibration (Lorch) speeds finishing, 6-9, p.110

Machinery:
Machinery rentals: Leasing, 4-14, p.86
Re-equipment market, 3-31, p.17
Shipments, 1957-58, 1-6, p.110

Machining:
Air Material Command alloy machining troubles, 1-7, p.116
Are these tomorrow's machining speeds? (Lockheed) shapes workpieces out of a rifle to graze cutting tools at high speed, 6-14, p.139
Barriers to faster cutting, 5-5, p.100
Boost your machining speeds cost crisis, 3-5, p.84
Chem-milling for aircraft and missile parts of magnesium-thorium alloys, 6-30, p.86
Chem-milled missile shell, TO, 1-13, p.69
Contour milling: new machine whips contouring job, 5-12, p.100
Contour rolling reduces waste, shaping operations, 3-10, p.126
Drive delivers constant high-power new variable speed cutter, 1-14, p.154
Grinding-gage combined: Millionths made easy, 5-19, p.148
Grinding combines machining operations, 6-30, p.80
Gun drilling deep holes easy, 6-9, p.105
Gun drilling on turret lathe cast iron part, 1-7, p.116
Hot finished tubing: Cost cutter for automatics, spring chucking system, 2-24, p.87
Hot metal machining, 1-13, p.84
How steel firm checks machinability (Union Drawn Steel), 6-23, p.108
How we saved $75,000 in three months (GE machinability program), 3-10, p.144
Machine slashes wheel turning time (Sipsel machines railroad wheel), 6-19, p.138
Makes most of machine time: Toolwelding motor bearing brackets before boring, 2-10, p.96
Mill handles big plate parts (Martin (Cincinnati) Hydro-Tel mill), 4-7, p.123
Parts are stretched to shape: automatic sizing machine insures roundness, 5-5, p.90
Pipe weld rings eliminated in new machining tech., 3-31, p.100
Quest for optimum machining program cosponsors untangle complexity of multiple spindle automatic jobs, 6-16, p.115
Small lot production jobs: automation is here, 3-24, p.125
Speed boost cuts tough metals, 6-2, p.88
Tapes control transfer line (Hughes Aircraft), 3-31, p.84
Valve body seats: Turret lathe replaces four machines, 4-28, p.98
Welded fastener cuts cost of machine, 1-21, p.142

Mackinac Bridge:
Dedication, pic., 6-23, p.75

Magnesium:
Bomarc uses magnesium-thorium alloys, 2-17, p.118
Magnesium-thorium chem-milled for aircraft-missiles, 6-30, p.86
Magnesium-thorium tips, TO, 3-17, p.93

Magnesium Association:
Elects, B, 6-2, p.63

Magnets:
Automatic soldering caps to speaker magnets, 6-2, p.68
Magnets cut conveyor costs, GE, 4-7, p.120
Test for magnetic chucks, 4-14, p.150
Zirconium-zinc compound, signs of ferromagnetism, TO, 6-16, p.97

Make Or Buy:
Cost crisis problem, Stewart-Warner, 3-31, p.58

Malleable Founders' Society:
Elects, B, 6-23, p.84

Management:
Average age of metalworking's executives, 2-17, p.120
Check your fringe costs, 5-5, p.62
"Executrend," management personnel survey, 1-20, p.30
How to sell ideas to bosses, 4-7, p.71
Layoffs, how to handle, 2-3, p.69
Listen to your employees (suggestion system), 4-21, p.68
Management Series:
Balance your management, 2-17, p.113
Building a labor contract, 5-19, p.125
Managing defense work for profit, 4-14, p.125
Pricing for profit, 6-16, p.87
Production control for profits, 3-17, p.83
Operations research solves management problems, 6-30, p.60
See Salaries

Mandrels:
Tube mandrel, Assel mill, 6-16, p.122

Manganese:
Pittsburgh Coke produces ferromanganese and spiegeleisen, 2-10, p.117

Manufacturers:
Census of manufactures, 6-16, p.58

Manufacturing Chemists' Assn.:
Elects, B, 6-23, p.84
Plant facilities, 2-3, p.58

Map:
Where steel consumers are, 1-20, p.36

Marketing:
1958: Boom miles, marketing shifts to high gear, 1-6, p.115
Marketeers plan production, 3-24, p.72
NIAA converts from advertising to marketing association, 3-31, p.42
Planning profitable new products, 5-19, p.96
Want to crack (sell) yourself market? Here's how, 3-10, p.90

Markets-Sales: See Business

Materials:
Pennsylvania State Univ. offers courses, 2-17, p.139

Material Handling Industry:
Automatic system trims handling costs? (Evinrude), 3-31, p.98
Cleveland exposition, 6-16, p.53
Mechanized finishing boosts profits (Hoffman), 6-23, p.90
Solutions to special handling problems, 6-30, p.82
Trucks speed coil drying (Carpenter Steel), 5-19, p.146
Stripper cuts handling costs of coiled strip (Caine Steel), 1-27, p.78
Vessel handles "hot" stuff, transports radioactive fuel, 3-3, p.117

Material Handling Equipment:

Conveyors:
Conveyorized finishing system, Hoffman Eng., 6-23, p.92
Elevator transfer conveyor moves sheet from shear to press brake, 4-14, p.150
Overhead conveyor racks move odd-shaped plumbing fixtures, 3-31, p.96

Cranes, Hoists:
Mobile crane moves battery of presses, 4-14, p.142
Telescoping boom extends hoist reach, 4-7, p.106

Pallets:
John Deere Harvester, interplant transportation of combine engines, 6-2, p.77

Racks:
Gage carts cut setup time, 4-28, p.102

Trucks (Gas & Electric):
Trucks speed coiled strip steel drying (Carpenter), 5-19, p.146
Solutions to special handling problems, 6-30, p.82

Melting:
A critique of vacuum methods (status in U. S.), 1-13, p.79
Carbon arc vs. induction melting cost, 1-27, p.74
Copper melting arc furnace starts up (AS&R), 2-10, p.100
Hot blast melting: Casters get better castings, 2-17, p.111

Mergers:
Armco-National Supply, 4-28, p.83
Bethlehem-Youngstown:
Steel merger goes to trial, 1-20, p.37
Weinfeld (Judge) decision this summer, 5-12, p.10
FTC reports merger trends, 4-21, p.51
Merger pace holds (industry groups acquiring: table, 2-17, p.77
Porter-Kidd Drawn Steel, 2-17, p.111
Urge to merge reasons despite government opposition, 1-27, p.18

Metal Cans:
Shipments, 2-24, p.117

Metal Cleaning Equipment:
Metal cleaning equipment costs, 6-16, p.51

Metal Lath Manufacturers' Assn.:
Elects, B, 3-31, p.76

Metal Roof Deck Technical Institute:
Elects, B, 5-26, p.93

Metal Powder Industries Federation:
Formed to succeed MPI, 5-5, p.80

Metallurgy:
Brazing filler metals are for heat resistance, 5-19, p.140
Looking inside stainless ingots, metallurgical factors, 2-17, p.102
Heated metals: Hot machining's new chance, 1-13, p.84
Processing 310 minimizes carbides, 1-27, p.72

Metals:
Cobalt: consumption and mines, 2-24, p.58
Columbium: Still on trial for jet engines, 4-21, p.62
Dysprosium, rare earth, 5-12, p.76 and p.80
Expanded metal for paint tray, 1-27, p.92
Imports: A warning, 5-12, p.57
Missile use:
Bomarc uses magnesium-thorium, 2-17, p.118
Atlas wears stainless skin, 5-12, p.51
Atlas uses titanium for helium storage, 3-17, p.47
Aluminum for structurals, 5-12, p.51
Titanium for missiles, 3-17, p.18
Vanguard metals, TO, 3-17, p.93
Plastic-coated metals (uses), 4-7, p.104
Space age metals, nonferrous role, 4-14, p.96
Space age metals preview (chart), 5-5, p.86
Space age metals: Needed, 6-16, p.102

Metalworking:
1958 outlook, 1-6, p.109 and p.119
'58 earnings outlook, 2-10, p.43
'58, 1st quarter report, 5-5, p.51
'58, midyear report, 6-30, p.49
Check your fringe costs, 5-5, p.62
Equipment prices stable, 5-26, p.68
Inventories: Recovery's key, 5-5, p.57
Manufacturers' sales, 1-6, p.162
Missile markets (see Missiles)
Pricing prospects (see Prices)
Radioisotopes used in metalworking, 5-12, p.104
Scrap prices, good sign for metalworking, 1-27, p.37
What U. S. budget means to metalworking, 1-20, p.35

Midwest Universities Research Assn.:
Atom smasher planned, 5-19, p.113

Minerals:
59 metal-mineral use to rise, 5-5, p.46
Seaton bill for metal-minerals, 5-5, p.55

Missiles:
Articles:
A sense of urgency in '58: Can we beat Russia to the moon, 1-6, p.128
Contract speedup: Solving the missile mess (AMRI surveys 100 firms), 2-3, p.62
Here are ballistic missile subcontractors (chart), 3-17, p.49
Market includes 'birds,' ports, launching sites (what it takes to launch three Thors), 3-10, p.84
Missile arsenal builds up (missiles, spending), 4-7, p.61
Missile scoreboard: You can't count your defense profits until you 'know your birds,' 4-14, p.130
Timetable: "A look at metalworking's space markets, 4-28, p.60
Nonferrous role in 'birds,' 4-14, p.96
AF ballistic div., small business office, 3-31, p.52
AF moon missile, 1-27, p.32
AFA report, 3-3, p.48
Agencies (see Gov't)
Antimissiles: Holiday co-ordinates, 1-27, p.44
Army chief, Medaris, 3-31, p.52
Atlas on launching pad (pic), 2-17, p.75
Explorer launched, 2-10, p.44
Explorer, forming the nose, 3-24, p.106
Explorer nose coat protects instruments, 4-28, p.106
Fabricating the Redstone (Reynolds), 1-20, p.66
Jupiter program scrapped?, 1-13, p.42
Jupiter or Thor?, 5-19, p.92
Jupiter nose-cone, re-entry solution, 6-2, p.30
Nike Hercules, 2-24, p.36
Ordnance Chief (Withington) talks missiles, 1-20, p.36
Polaris launcher tested, 5-5, p.61
Refractory used to launch rockets, TO, 3-17, p.93
Space flight by '63, nose cone progress, 1-13, p.39
Space program headed by Johnson (GE), 2-17, p.80
Space program, Dr. Rabi reports, 3-10, p.86
Space programs, interservice rivalry, 5-5, p.58
Solid fuels suggested, 1-20, p.29 and p.36
Tapping the missile market (editorial), 1-20, p.33
Titan testing, pics., 4-28, p.66
See Assn. of Missile & Rocket Indus.
See Defense Contracts
See Metals

Mobilization: See ODM

Molybdenum:
Vapor detosition processes open wider uses of metal, 6-30, p.96

Moon:
Moon forces may control earth, 2-10, p.50

Motor Drive: See Power (Mechanical)

Motors & Generators:
All-ac drive answers need (Varepack), 4-7, p.108
GE automates job shop, 1-27, p.38
Housingless motors, power packages, 5-12, p.96
Reliance Electric builds set on flatcar, TO, 2-17, p.123
Rhodium plating commutator segments prolong electric motors, 3-3, p.100
Westinghouse giant motor-generator, 5-12, p.47

Multiple V-Belt Drive & Mechanical Power Transmission Assn.:
Elects, B, 2-3, p.100

N

National Association of Architectural Metal Manufacturers:
Elects, 6-2, p.63

National Association of Corrosion Engineers:
Elects, 2-10, p.74
Elects exec. sec'y, 5-26, p.96

National Assn. of Pipe Nipple Manufacturers Inc.:
Inaugurates "Seal of Quality" program, 4-14, p.122

National Association of Purchasing Agents:
Business upturn seen, 5 19, p79; 6 2, p79

National Association of Waste Material Dealers Inc.:
Elects, B, 1 21, p96
Meeting, report, 3 31, p57

National Automotive Dealers Assn.:
Dealer territorial security sought, 3 24, p79

National Bureau of Standards:
Electroless plating chemical process deposits nickel, 6 2, p77
Receiving alloy standards, B, 6 16, p108

National Constructors Assn.:
Elects, 2 24, p66

National Industrial Advertisers Assn.:
Converts to marketing group, 5 31, p42

National Industrial Conference Bd.:
3rd quarter outlook, 3 17, p37
Canadian markets survey, 2 17, p85
Capital investment per worker, 4 14, p87
Consumer price index, 2 3, p58
Dividend policy survey, 2 24, p29
Edinburgh, Or plans, 5 19, p86
Jobless pay cuts by States, 4 21, p61
Surveys foreign licenses, 3 24, p67

National Machine Tool Builders Assn.:
1958 tool outlook, 2 3, p66
Retains Lewis Research for cost reduction, 3 31, p18
Equipment sales shipments, price outlook, 5 26, p68
Sales school set, 3 10, p141
Statistics on metal forming types of tools, 3 10, p73

National Office Management Assn.:
Surveys data processing use, 1 27, p40

National Screw Machine Products Assn.:
Elects, B, 5 19, p118

National Tool & Die Manufacturers' Assn.:
Recession report, 3 12, p39

National Wholesale Hardware Assn.:
Managing director named, B, 5 26, p96

Navy:
Price of not re-equipping; Cost to keep outmoded vertical turret lathes, 6 23, p31

New Plants & Equipment: See Capital Expenditures

New Products: See Product Development

New York University:
Course on nuclear reactor materials, 4 21, p119
Sponsors team observing Russian steel mills, 2 3, p129

Nickel:
Cuba, largest source by '60, 3 10, p109
Cuban ores, 3 17, p48
Cuban facilities, 4 14, p80
Freeport Sulphur bearings, "Inconel 601" in Cuban contract to supply nickel to government, 6 2, p42
Free World output by '61, 1 20, p30
Microgram nickel, new material deposited on plastic sheet is flexible, 1 28, p115
Nicaro side plans, 1 28, p62
Nickel-base alloys advance, industry report, 2 17, p177
Nickel stocks up, 5 26, p174

Nitriding:
Harder austenitic stainless with nitriding, 6 30, p85

Nondestructive Test: See Inspection, Testing

Nonferrous:
Expansions in industry, 6 16, p156
Nonferrous role in missile 'birds', 4 14, p96
USDA program, barter comeback?, 5 19, p229

Nuclear Reactors: See Atomic

Numerical Controls:
ASTE studies, 5 5, p100
Bendix trains operators; Sales start with education, 6 16, p52
Magnetic-data tape service, Stromberg-Carlson, 3 10, p141
Numerical control cuts cost, Lockheed, 6 2, p66
Punch card control, Jo-Line reversing roughing mill, 1 27, p39
Punch cards aid quality control, Allis-Chalmers, 3 10, p122
Racer (GE) reports; Automation is here, 3 24, p125
Riveter for aircraft, pic, 5 5, p85
Tape cuts milling cost, Lockheed profiling machine, 3 10, p141
Tapes control transferline 'short hops', Hughes Aircraft, building block design, 3 31, p84

O

Office Automation:
Data processing gains; Businesses that have office automation report, 1 27, p40

Office Workers:
Unions lose ground in clerical drive, 1 13, p29
Supervisors pay, 4 14, p90
Whitecollar Wages rise; what clerical workers are paid, 1 13, p45

Office of Defense Mobilization:
Coming shift to M-day plans (Gray to report to industry), 2 10, p14
Gordon Gray to new post; Leo Hoegh heads DDM-FCDA, 6 30, p14
Machine tool bill, S 2595, 3 10, p73
Machine tool surplus program, 6 16, p54
McKinsey 'associations' recommends abolishment of agency, 4 28, p62
Metal allotments 'A' products, 1 27, p31
Potter lends light against OEM, 5 5, p58
Stockpiling recommendations, 2 3, p57
Titanium producers meet, 2 10, p25
Tool disposal task force group, 3 3, p60

Ohio:
Court ruling on SUB, 3 10, p74

Oil:
Price wants royalties fund, 1 20, p26

Oil & Gas Equipment:
Oil field equipment inventories, sales, 3 26, p67 and 4 7, p110
Oil-field steel pipe coils like fire hose, 5 19, p50

Openhearths: See Steelmaking

Operations Research:
Operation 'OR' solves problems with aid of Case Tech's 'OR' group, 6 30, p60

Orders & Inventory:
Data processing; Production control for profits, 3 17, p85
Republic unveils order process system, 4 7, p67

Ores:
Iron-manganese ore deposit, Maine, 5 5, p57
See Iron Ore

Oxygen:
Oxygen pipeline (Linde) to U S Steel plants, 5 26, p85

P

Packaging, Containers:
Foam package protects instrument, TO, 6 9, p87
Metal can shipments, 1 6, p172
Pails are stretched to shape, automatic sizing machine, 5 5, p90
Staples strengthen corrugated boxes, 2 3, p128
Steel strapping, improved packaging, 3 17, p129
Thompson Products packaging line, cost saving, 5 26, p100

Pails:
Automatic sizing machine insures roundness; Pails are stretched to shape, 5 5, p90

Paint: See Finishes

Partmakers:
Parts: Size inquiries enough, 3 24, p61
Part stocks level out, 4 7, p137

Pennsylvania:
State-financed Industrial Development Authority aids employment, new, 2 24, p38

Pennsylvania State University:
Material courses offered, 2 17, p129

Philip's Research Laboratory:
Machine for bend tests, 2 3, p114

Photography:
Camera checks furnace flames, 6 2, p74
Photography uses many jobs (62 uses); Sales rise for equipment, 4 14, p88
Photographic supplies plastic film, Stabilene, 5 19, p150
Photocopy income sales, 1 21, p62

Pickling:
Acid handling safe with level control, 4 28, p116
Rust stainless swivel stands up to pickle bump, 4 14, p141
Pin down titanium pickling variables, Mallory-Sharon research, 6 23, p61

Pig Iron:
Consumption and stocks 1957-58, 2 24, p141

Pilot Plants:
Columbium-titanium plant on stream, 2 17, p77
Inland Steel Stepping iron ore new process, 2 17, p55
Machine tools pilot runs better units for buyer, 2 10, p92
Republic direct reduction Stepping mills, 3 17, p102

Pipelines:
Coal pipeline (Ohio) seen operating, 3 17, p28
Oxygen pipeline to U S plants, 5 26, p85

Pipe & Tube Mills:
J & L pipe mill Aliquippa, 6 30, p53
National Tube Lorain Works, 2 17, p73

Pipe, Tubing, Fittings:
Aluminum tandem pipe, 4 21, p113
Hot finished tubing grinding problem solved, 2 24, p87
Light piping saves dollars, tubing for piping system, 5 19, p150
Oil pipe coils, 1 20, p30
Tube bending, 2 10, p81
Tube mandrel improved for Assel mill use, 3 10, p122
Tubing steels for annealing handling, more of Hastelloy X, 6 23, p167
Tubing splines rolled in, 6 30, p94
Uniseam pipe welder semiautomatic, 6 9, p88
Welded tubing four ideas for using, 4 28, p100
Welded tubing tests, ultrasonic, 1 20, p72

Plant Expansions:
Alan Wood, 3 10, p82
American Can shearing, 6 30, p76
Ceco steelmaking, 5 12, p47
GE automates job shop (Small AC Motor & Generators), 1 27, p38
GE steel casting foundry, 3 17, p48
Granite City Steel, 5 5, p79
J & L completing $82-million project, 2 10, p73
J & L pipe mill, Aliquippa, 6 30, p53
Kaiser hot roll mill, Ravenswood, 6 9, p58
National Tube pipe mill, Lorain, 5 12, p73
Ohio Ferro-Alloys, silicon plant, 2 17, p75
Pittsburgh Coke, ferrous manganese furnaces, 2 10, p117
Republic bar mill, Chicago, 6 30, p53
Superior Tube, Wapakoneta, O., 1 13, p66
Timken 5-year program, 6 16, p79
U S Steel, sintering annealing furnaces, 6 23, p75
Wolverine renovates Detroit plant, 1 13, p38

Plant Layout:
Painters: Plating re-layout trims manhour waste, 3 10, p124
Thompson Products packaging dept. cuts costs, 5 26, p100

Plant Protection:
Aids search for theft of small tools, 6 9, p81

Plant Sites:
Steel mills for Virginia, 1 6, p10

Plastics:
As plastics adapt to rise (chart of major plastics), 1 13, p42
Adhesives (mirror joints) and Sealers: Manufacturer of lost-specking goes epoxy powder, 6 16, p124
Here's a better plastic for new epoxy die, material cost one-tiller of steel powders, 3 17, p76
Plastic goes (Epoxy-Alloy) get new life, 2 24, p76
Plastic film, Stabilene, photo-engraving templates, 5 19, p150
Plastic Tumbler-coater, metals plus mineral chips, 4 7, p101
Plastics and tooling costs, epoxy, 2 3, p111
Plastics in the Sodeteln, tetrafluor ethylene, 2 3, p128

Plates:
Channeled Horizontal construction materials Hollow plate speeds heat exchange, 1 7, p107

Plating: See Electroplating

Plating Machinery:
Plating, Inc. (Detroit) cuts manhour waste, 3 10, p124
Stanley Chem Plates cadmium into assemblies, 2 24, p83
Western Electric Conductor wire plates continuously, 3 24, p118

Plumbing Brass Institute:
Elects, 3 24, p88

Plumbing Fixtures:
Industry report, 2 10, p47

Porcelain Enamel:
Electric report, 6 16, p56
Industry report, coated aluminum, 3 3, p143
Tunnel coating, 6 9, p87

Positioners: See Welding

Powder Metallurgy:
Its outlook, powdered metal parts, 2 3, p74
Abrasive pellets solves barrel finishing problem, 6 30, p96
Ball mill blends metals in powder form (Walmet Corp), 2 24, p83
Brass screw nuts of metal powders, To, 1 27, p71
Metal powders compacted into strip; rolling mill, 3 31, p96
New metal powders, To, 1 13, p62
Nickel strip from powder, TO, 6 9, p87
Plastic die made of treated metal powder, 3 17, p96
Powder parts add sell to home power tools, 5 26, p114
Powder parts made without a press, slip casting tech, 5 19, p162

Power Brushes: See Brushing

Power (Mechanical):
See Drives & Controls

Power Tools:
Heavy-duty power drill, 6 23, p104
Powder parts add sell to home power tools, 5 26, p114

Precipitators: See Dust Collectors & Filters

Prefabricated Home Manufacturers' Institute:
Elects, B, 1 7, p98
Renamed, B, 1 28, p91

Pressed Metal Institute:
Partmaking prospects, 3 24, p61
Stamping practices and tolerances, 2 3, p122

Presses:
Bolts (self-locking) hold presses, 3-17, p.98
Brake uses 7-in. plates, 6-23, p.96
Erie Foundry forging press; designed for user wants, 3-17, p.105
Extrudes aircraft shapes, 3-3, p.81
Haller press built in Germany, 3-3, p.63
Moving offset presses by mobile crane, 1-14, p.112
Press flexibility boosts output; Automatic Electric teledictor equip., 3-10, p.124
Press for precise assembly at Frigidaire, 3-3, p.108
Presses speed assembly; Pin hinges secured with rivets, 6-30, p.96

Pressure Vessels:
Cask transports radioactive fuel elements, 3-3, p.147
For producing nuclear power; Westinghouse plant surface ship, part, 2-17, p.74
Inserts aid atomic reactor vessel, 3-10, p.120
Titanium in helium storage holders, 3-17, p.158

Prices:
Competition of price commodities, 1-6, p.152
Component of Post prices hit 6-11-56, 3-10, p.84
Construction equipment, 6-2, p.87
Consumer durable interest, 6-9, p.[illegible]
Copper, 1-21, p.149
Economist keeps Wall St. jittery, 2-10, p.74
Equipment leases steady, 3-24, p.69
Finished steel, 1-6, p.177
Gasoline, NCAC rise in gas, 3-10, p.86
Lead up, 6-9, p.109
Nodulizing, 3-7-11, p.121
Pipe, wire rods, aluminum slow, 2-24, p.97
Price-wage changes (Jan. 1948-Jan. 1956), 3-12, p.16
Rise with cut, 3-26, p.157
Scrap dominates, 6-9, p.109
Scrap, hardening of, business trends, 1-27, p.37
Steel will prices (see articles), 3-12, p.15
Titanium mill up, 1-28, p.135

Pricing:
Depreciation, Share in pricing, 2-10, p.[illegible]
Pricing for profit and competition, 6-18, p.57

Printed Circuits:
Industry report, 1-7, p.66
Motorola report kit, TO, 6-23, p.89

Product Development:
Metalworking research programs grow, 3-10, p.107
New products in '56, 3-10, p.71
Organizing for new product growth; What should you make?, 5-19, p.96
Product licensing; a road to profit, 2-24, p.16
Research Ebbs; Should you buy research, 1-7, p.62
Wrought iron 4-H's new dev. for Rivets, 2-24, p.41

Production:
Aluminum, '57, 1-13, p.124
Blast furnace, Mar., 4-28, p.112
Copper, free world reserves, 1-13, p.36
Europe, unfinished steel high, 1-21, p.59
Nickel, Free World capacity, 5-26, p.174
Pig iron, Jan., 3-3, p.169
Steel, BISA predicts, 1-13, p.42
Steel ingot, Jan. '58 and 1957, 2-17, p.181; 3-17, p.135; 4-21, p.189; 5-19, p.204; 6-16, p.140
Steel ingots and castings, monthly, 1-6, p.165
World production, steel ingot and castings; pig iron and ferroalloys, 1-6, p.164

Production Control:
Forge shop computers, planning and scheduling, 3-17, p.88
Marketeers plan production, Whitney Chain, 3-24, p.72
Production control for profits (management series), 3-17, p.83
System keeps tab on production (Telecontrol), Hancock Mfg., 1-14, p.160

Production Costs:
See Cost Crisis
See Cost Cutting

Production Processes:
A. O. Smith auto frame lines, 1-21, p.71
Bending machines form precision "parts (series), 2-10, p.79
Ingenuity pays off, production plans at Chance Vought, 3-10, p.142
Investment castings go civilian, intricate and hard to fabricate parts, 3-3, p.65
GE machinability program; How we saved $75,000 in three months, 3-10, p.141
See Automation
See Cost Crisis Competition

Productivity:
Big Three auto companies-UAW meetings; reports, 3-31, p.49

Profits:
"5%" prates, worth cured, '57's, 2-10, p.63
As viewed by managers, ready to fight for profits, 1-6, p.119
As viewed by non-gov't, 1st half compared with '57, 6-30, p.52
Mining for defense work for profits, 1-14, p.125
Pricing for profits, 6-16, p.57
Production control for profits, 3-17, p.83
See Financial

Profit Sharing:
UAW demands, 1-20, p.20

Proxy Fights:
Proxy Fights — Their ins and outs, 2-24, p.45

Public Relations:
Gimbel's keeps stockholders; Annual report's press relations, advertising, 2-17, p.76
Kaiser Forge policies, 1-27, p.45

Public Works:
(refuse), 3-17, p.59
Recession remedy?, 2-17, p.67
States handling, 3-3, p.60

Pumps:
Pumps for corrosives, TO, 2-17, p.123
Standards for pumps, TO, 1-13, p.69
Submerging pumps, 5-5, p.109

Punch Cards: See Numerical Controls

Punching:
Gear layout cuts hole punching time (Martin), 2-3, p.130

Purchasing Agents:
Chicago agents note increased pressure on prices, 3-12, p.29
How buyers beat cost crisis, 3-17, p.46
PAA releases shipments would aid portsmakers, 3-24, p.61

Purdue University:
Machine tool sales school scheduled, 3-10, p.141

Q

Quality Control:
Basic guides to valve steel quality, 1-28, p.106
Punch cards aid quality control, 3-10, p.122
Westinghouse atomic fuel dept.; Job shop quality control, 1-13, p.75

Quenching:
Slow quench, polyvinyl alcohol solution, TO, 5-5, p.83

R

Radio, Television:
Atomic energy control, TV color testing, TO, 1-13, p.69
Russian lessons via TV, 2-10, p.38

Radioisotopes:
AIF report, uses, 2-3, p.58
Isotopes; Industry's new work horses, 5-12, p.104

Railroad Wheels:
Machine slashes wheel turning time, 5-19, p.138
Transfer machine shapes car wheels, 6-16, p.108

Railroads:
Danger signs in 1956, 6-23, p.48
Depreciation allowance, 1-27, p.32
Diesels take over, modernization costs, 1-14, p.90
Government aid to industry?, 6-23, p.47
Rail troubles pinpointed by Sen. Smathers subcommittee, 6-2, p.47
Track alignment job (for supersonic rocket sleds in missile testing), 3-17, p.99

Rare Earths:
Dysprosium, new, TO, 5-12, p.86
Prices, 6-23, p.107

Reactors: See Atomic Energy

Real Estate:
Chicago investments, 3-31, p.67

Recession: See Business

Reclamation:
Solvent-solvent recovery unit at Kaiser, 3-10, p.144

Reduction Plants:
Garnet-aluminum reduction plant, 6-2, p.62
Inland-Steel reduction plant, TO, 6-2, p.65
See Iron Ore

R-E Equipment Market:
See Machine Tool Industry

Refineries: See Smelting & Refining

Refractories:
PCE nozzles for steel pouring, 1-21, p.144
What's new in refractories, 3-31, p.89

Rentals: See Leasing

Research:
Carpenter Steel lab; New tools for corrosion research, 6-23, p.96
Lead-zinc research, 5-19, p.88
Lead-zinc research, overseas producers, 2-10, p.140
Management use, survey, 1-27, p.32
Metalworking facilities grow, 3-10, p.107
Operations research solves management problems, 6-30, p.60
Should you buy research (how two companies used labs), 1-7, p.62
Union Drawn Steel lab; How steel firm checks machinability, 6-23, p.108

Rivers:
Cuyahoga River freezes, 2-17, p.68

Rivets:
Rivet shaver, Boeing Airplane, 6-9, p.108

Roads: See Highway Program

Roll Forming:
Roll forming gets an assist, GE gas turbine blades, 6-2, p.70

Rolling Mills:
Hard facing aids to guide life on steel plate mill, 6-23, p.96
Horizontal mill compacts metal powders into sheet and strip, 3-31, p.96
Profile rolled strip metal, TO, 5-26, p.99

Rubber:
Automated molding process offers close tolerance components, lowers costs, 6-30, p.59
Synthetic Viton takes heat, TO, 6-30, p.79

Russia:
Articles by Irwin Such:
Steelmen (Ryerson team) tour Russia, 6-16, p.48
West meets East, 6-23, p.49
It'll take years for Russia to catch up, 6-30, p.54
Carney (New York University group) reports, 2-3, p.129
Editorial: Russia's goal: The world, 6-30, p.47
Iron ore reserves:
Eyes East for iron, Asian district, 1-20, p.38
Moves mills to Urals, 2-3, p.129
Fires four missiles per mo., 6/9, p.50
Leads in space, lags in atomic power, 1-13, p.46
Manned satellite in three years?, 4-14, p.26
Metallurgical research program seeks leadership, 2-24, p.29
Siberian mill planned, etc.; report by visiting AIME team, 1-7, p.56
Scientific threat?, 2-3, p.70
Steel outlook by '60, 4-14, p.30

S

St. Lawrence Seaway:
Added funds needed for schedule, 2-24, p.42
Control fight, tear high tolls, 6-30, p.44
Politics trouble seaway, 3-24, p.61
Seaway tolls set, 4-28, p.62; 6-30, p.56

St. Lawrence Seaway Development Corp.:
Headquarters now in Massena, 2-24, p.61

Safety:
AISI safety record, '57, 1-7, p.66
Acid handling; control for safety, 1-28, p.115
Bethlehem Steel; Safety doesn't cost, accidents do, 3-3, p.102
Grinder rev. and Geiger safety device for coke ovens, TO, 3-24, p.102
Hot metal weighing, spill control, 1-27, p.83
Safety drives (on indices); Employee committees at Great Lakes Carbon, 6-23, p.92

Salaries:
Exec. pay; Ps profit role, 3-31, p.50
IBM workers on salary basis, 1-7, p.64
Mobile management, how to pay, 1-21, p.51
Supervisor pay up, 1-14, p.90
Whitcraft's salaries in house steel, 3-24, p.66

Salesmen:
Metal products salesmen, miles traveled, 2-10, p.38

Sales Programs:
Home Equity campaigns; buy now!, 5-5, p.66
Hotpoint stimulates buyers, 1-14, p.70
Motch & Merryweather holds successful machine tool show, 5-19, p.151
Townsend pegs m., 1-20, p.15
Trade marks help you sell, 3-17, p.54
Zone program, posts recession, 1-21, p.60

Sanding Machine:
Chance Vought; belt-type m/c from salvaged parts, 3-10, p.142

Satellites: See Missiles

Scales, Weighing:
New ways to use electronic scales, 2-17, p.124
Scale spill-safe hot metal weighing at Sheffield, 1-27, p.83

Scrap:
Aluminum scrap, industry report-prices, 6-9, p.129
Barometer for metalworking, scrap prices, 1-27, p.37
Consumption and stocks, 1957-56, 2-24, p.124
Exports fall, leading buyers of American scrap, 6-16, p.127
Scrap handled three ways, Armco openhearth, 6-9, p.96
Scrap upgraded new way, "Polerizing," Houston, 5-19, p.91

Scrap Dealers:
Charge ICC discrimination, 2-10, p.50

Screw Machine Products:
Industry report, hellwether, 5-12, p.56
Industry report, socket screws, 6-9, p.60
How Steel firm checks machinability, 6-23, p.108

Severance Pay: See Labor (UAW)

Shearing: See Cutting, Shearing

Sheets & Strip:
Galvanized sheets, industry report, 6-30, p.121
Presintered strip produced by pouring metal powders into rolling mill, 3-31, p.96
Silver brazed stainless clad strip, 2-10, p.83

Strapper cuts handling costs, coiled steel strip, 1 27, p.78
Strip descaled automatically, 3 10, p.136
Transfer conveyor moves sheet from shear to press brakes, 4 14, p.150
Tube-in-strip process to aluminum, TO, 3 10, p.121

Shipments:
Alloy steel, table, 2 10, p.121; 3 3, p.170
Diecastings, 3 17, p.152
Extrusions-nonferrous, 4 21, p.182
Finished steel in 1957, five market outlets, 3 10, p.164
Gray iron castings, 1 6, p.169
Metal cans, 2 24, p.117
Steel, ingot, Jan.-Sept. 1957, 2 17, p.184
Steel by market class, 2 17, p.184
Steel by market outlets (table), 1 27, p.110; 2 17, p.184; 3 24, p.157; 5 19, p.203; 6 23, p.134
Steel products, table, 1 27, p.107; 2 24, p.117; 3 24, p.157; 6 2, p.112; 6 23, p.127
Titanium, gain, 5 19, p.197
Tool steel, 3 17, p.153

Ships, Shipbuilding:
Ammon carrier, B, 6 9, p.84
Atomic sub, Skipjack, 4 14, p.113
Atomic subs, status, 2 3, p.70
Japan leads as shipbuilder, other nations, 2 3, p.58
Merchant ships, decline, 6 23, p.50
Merchant ships equipped with hydrofoils, contract, 4 21, p.52
Seaway, special ships?, 3 24, p.65
Shipbuilders' run aground? Ships and company contracts, 5 5, p.53
Shipbuilding contracts, 4 7, p.92
West Coast boom, 5 5, p.54

Shot & Grit:
Abrasive shot sales, 4 28, p.65

Shotblasting: See Cleaning & Blasting

Silicon:
New pig-cast form, ferrosilicon, TO, 2 3, p.107
Ohio Ferro-Alloys produces silicon metal, new plant, 2 17, p.75

Silicon Steels:
How to choose and improve them, 6 9, p.116

Slag:
1957 demand heavy, 6 30, p.148

Slitters:
Control wedge slitter for tantalum foils reduces trim waste, 6 23, p.104

Small Business:
How to get subcontracts, 5 26, p.61
Mills bill introduced, 5 5, p.58; status, 5 26, p.62
Missile contracts, subcontractor, 2 10, p.37

Small Business Administration:
Permanent SBA urged by Sen. Thye, 6 30, p.59
Steps up licensing program, 4 21, p.64

Smelting & Refining:
Electric melting size furnace for copper, 2 10, p.100
Electric smelters, TO, 6 23, p.89
Inland iron ore pilot plant, 2 17, p.68
Refinery cooling coil stud welded, 2 24, p.80

Smoke, Smog:
Air pollution cost per person in urban areas, 4 14, p.80
Air pollution tracer, powdered oxide, TO, 2 10, p.77
Smog analyzer, TO, 4 14, p.135
Smoke control equipment sales, 3 3, p.58

Socialism:
Editorial: Road to socialism (Reuther proposals), 3 3, p.51

Society of Automotive Engineers Inc.:
Elects, 1 20, p.62
Meeting, economies added to discussions, 4 14, p.99

Society of Die Casting Engineers Inc.:
Elects, 2 17, p.108

Society of Reproduction Engineers:
Headquarters, B, 6 16, p.76

Society of Security Analysts:
Aluminum industry forecast by Davis, Aluminum, Ltd., 4 14, p.91

Solar Energy:
Giant solar furnace, Arbu, 3 24, p.103
Solar heating of homes, 4 21, p.63

Soldering:
Paste solders automate assembly (magnets), 6 2, p.68

Solvents:
How to test solvent quality (degreasing), 1 13, p.86

Sound: See Ultrasonics

South America:
Better U. S. relations needed, congressional views, 5 26, p.64
Brazil ore fields acquired by Hanna, 3 3, p.56
Venezuela buys Westinghouse equipment, rolling mills, 2 3, p.64

Space Age:
See Missiles
See Metals

Springs:
How to pick stainless springs, 6 16, p.120
Springs hit right spots (wrister springs), 3 10, p.148

Sprinklers: See Fire Equipment

Stainless Steel:
1958 Stainless outturn starting, 5 26, p.151
Bio heat treating processing minimizes carbides, 1 27, p.72
Atlas missile, stainless use, 5 12, p.51
Coloring process (Pennvalt), Stainless gets new sales appeal, 5 12, p.xx
Harder stainless practical with nitriding, 6 30, p.55
How to pick stainless springs, 6 16, p.120
Looking inside stainless ingot, 2 17, p.132
Stainless bar heat treating, Customers call the temper, 2 24, p.75
Stainless forging takes precise control (17-4 PH and 17-7 PH), 6 9, p.92
N-155 cracked plate: has stainless skin, 3 31, p.51

Stampers:
Job shop stampers' industry report, 6 2, p.106

Stamping:
Brazing salvages cracked stampings, 3 3, p.119
How to cut stamping costs, 2 3, p.122

Standards:
Needed: Standardized inch, 2 24, p.29
Steelmen view product standards, 1 20, p.57
See NBS

Standard Industrial Classification (SIC):
Census data, industry products, 6 16, p.98

Staples: See Packaging, Containers

Static Switching:
Stabbing mill: Static switching catches on, 1 27, p.80

Steel Founders' Society of America:
Elects, B, 3 31, p.76
Turn-Product Development Contest:
Cutting costs: Three blue ribbon ideas, 3 3, p.96
Sheet molds add to steel's uses, 2 24, p.70

Steel:
Chromallized steel, 6 9, p.90
Electrical steels: How to choose and improve them: B. A. Rutledge, 6 9, p.116
Electrical strip steel new, 6 23, p.107
Plated steel tips for users, 4 14, p.157
T-1 (U. S. Steel): These steels have what the users want, where used, 2 17, p.127
T-1 steel, cost saving?, 5 19, p.163
T-1 steel used for nuclear test, 3 31, p.91
Valve steels, quality control, 1 27, p.106

Steel Industry:
Case for higher prices, 5 12, p.45
Expansion, to year forecast, 5 19, p.80
Financial analysis (insert), 3 31, p.55
Inventories, mid-year pickup, 4 28, p.135
Steel & iron required for products, 1 6, p.173
Imports worry steelmakers, 1 27, p.105
Imports by country of origin, 5 7, 4 7, p.143
Profits (selected firms), 56-57, 2 10, p.13
Profits (selected firms), 1st quarter '58-57, 5 5, p.51
Profits, per cent of net sales (selected firms), 5 12, p.45
Steel producers absorb more freight, 4 14, p.191
See Capacity
See Consumption
See Finished Steel
See Production
See Shipments

Steelmaking:
AIMI electric furnace steel conference practices, 1 13, p.80
Annealing costs tumble, opened-coil (Lee Wilson), 1 28, p.104
Annealing continuously 5,000 a grand scale (Weirton), 1 20, p.74
Annealing-direct fired coil revives, 5 12, p.94
Balance of steel power shifts (American, Western Europe, Russia), 5 5, p.52
Basic guides to steel quality control, 1 28, p.106
Blast furnace is 'quicktrigger', 6 16, p.106
Camera checks blast furnace linings, CF&I, 6 2, p.74
Coke: We have plenty of good coking coal, 2 24, p.78
Corrosion research, Carpenter Steel Lab., 6 23, p.96
Direct reduction is closer (U-N), 2 17, p.102
Electronic equipment (Weirton) organized for electronics, 3 24, p.113
Gage control for tandem strip mill, J&L, 4 7, p.110
German-American style: August Thyssen-Hutte, 3 10, p.150
Ladle relining platform cuts costs, 6 30, p.xx
Lime powder steelmaking (French), ex. 5, TO, 1 28, p.97
Looking inside stainless ingots, 2 17, p.132
Nozzle changes pay off, steel pouring, 4 21, p.144
Openhearth conversion:
Analyze for combustibles, tie coil to oil-natural gas firing, Standard Steel Wks., 5 26, p.108
Gas atomizes open-hearth fuel (coil-steam) to oil-natural gas firing, Empire-Reeves, 4 14, p.144
Openhearths: Plan for long bottom life, 2 10, p.86
Oxygen lances: inserted through backwall for decarburization, 6 30, p.xx
Refractories: What's new, 3 31, p.86
Safety precautions, Bethlehem Steel, 3 3, p.102
Scrap charging buggy elevator (Armco): Three ways to handle scrap, 6 9, p.96
Slab mill (Alan Wood): Uses fireproof hydraulic fluid, 2 3, p.117
Slab mill (GE): Static switching catches on, 1 27, p.80
Stainless processing: Looking inside stainless ingots, 2 17, p.132
Vacuum methods, a critique (when to use each tech.), 1 13, p.79

Steel Mills:
'57 expenditures, mid-Atlantic, 2 10, p.117
Armco to build, 5 19, p.80
Barium-N.J. site, 6 9, p.50
Ceco to make steel, facilities, 5 12, p.47
Duquesne adds rolling mills, 1 27, p.59
German, August Thyssen-Hutte mill, 3 10, p.130
Hawaii, 4 7, p.56; 6 2, p.62
India, 6 2, p.10
J&L pipe mill, 6 30, p.53
Oxygen plant (Linde) to serve four U. S. Steel plants, 5 26, p.58
Portugal plant, West German-Belgian group, 2 17, p.68
Republic bar mill, Chicago, 6 30, p.53
Revamping-cold strip mill (Campbell Wks.), saves with insulated power cables, 5 12, p.92
Russian mill, Siberia, 4 7, p.56
Saskatchewan mill proposed, 4 21, p.85
Stelco blooming mill, 3 17, p.71
Venezuelan mills buy electrical equipment, 2 3, p.64
Virginia bids for Steelmaker, 1 13, p.10
West Coast facilities, expanded, 3 24, p.59

Stockholders:
Annual reports woo stockholders, 2 17, p.76
AMC employee stock program, 5 5, p.46
Du Pont plans for GM stock disposal, 6 2, p.50
NICB surveys dividend policies, 2 24, p.29
Proxy fights, their ins and outs, 2 24, p.56

Stockpiling:
GSA may bail out, 2 3, p.182
Revisions recommended, 1 13, p.36; 2 3, p.57; 2 10, p.44
Uranium stockpile called for, 3 3, p.60

Storage:
Gage cuts storage to machines, 4 28, p.102
Automatic system (racks) trims handling costs, Extrudex, 3 31, p.68
Truck roller racks ease handling, Intertype Co., 5 26, p.117

Strapping:
Strapper cuts coil handling costs, 1 27, p.78
Strapping goes automatic (improved packaging), 3 17, p.129

Strikes: See Labor

Structurals, Plates:
American Bridge's A. J. Paddock says: Structurals talents now, 2 24, p.111
Foreign steel output, threat?, 1 27, p.105
Metal inventories, 2nd quarter, 2 3, p.159

Subcontractors: See Defense Contracts

Suggestions: See Incentives

Supplemental Unemployment Benefits:
Angle on SUB (GM-Ford finds), 6 30, p.43
Average weekly pay, 2 3, p.69
Ohio Court: SUB and state unemployment pay?, 2 3, p.69; 2 17, p.67
Ohio court ruling, 3 10, p.74
UAW status of funds, payments to Big Three, 5 5, p.45
U. S. Steel and Alcoa trim pay, 6 23, p.41

Surface Treatment:
Vibration machine (Lorco) speeds finishing, 6 9, p.110
See Cleaning, Blasting
See Electroplating
See Inspecting
See Finishes, Coatings, Paints
See Pickling

Suggestion System:
Listening to your employees, 4 21, p.68

Supervisors: See Foremen

Surveys:
AIC: Vacation trends, 6 2, p.29
The tool outlook for '58, STEEL, 2 3, p.66
Average age of metalworking execs: Heidrick & Struggles, 2 17, p.120
Demand for marketing execs: Heidrick & Struggles, 1 20, p.30
Supervisor pay, AMA, 4 14, p.90
Vacation trends, AIC, 6 2, p.29

T

Taconite:
Minnesota plant ruled out by U. S. Steel, 5 5, p.46

Tape Controls: See Numerical Controls

Taxes:
AISI executives hit tax laws, 5 26, p.57

Administration program soon, 5-12, p.52
Auto excise cut sought, 3-24, p.55
Corporate taxes hit by Blough, 3-3, p.58
Corporate taxes extended, 6-16, p.54
Johnson (Sen.) begs tax cut switch, 5-12, p.52
Small business and coming", 4-7, p.68
Tax cut outlook, individual and excise, 3-17, p.37
U. S. Steel charges unrealistic tax hurts economy, 3-24, p.63
See Depreciation

Technical Centers:
ASM headquarters building, all-metal geodesic dome, 3-10, p.80

Telephone Equipment:
Press flexibility boosts output, 3-10, p.128

Thread Inserts:
Outdoor lighting fixture use thread inserts, 6-28, p.107

Tin Research Institute:
Bearing metal tin combined with aluminum, 3-31, p.90

Titanium:
Convair study aimed at Air Force, 1-20, p.62
Crucible plant turned over to government, 3-24, p.63
Hot forming titanium, resistance heated, 3-3, p.109
Industry report: Titanium demand drops but melt and mill capacity rises (producers), 3-24, p.62
Industry report: New life for titanium, shipments, 5-19, p.197
Infrared pyrometer control heating, 2-3, p.130
Missiles use titanium, 3-17, p.18
Pin down titanium pickling variables, 6-23, p.94
Plant contracts, details, 2-10, p.37
Plating helps titanium, 5-5, p.102
Titanium for anodizing rack tips, TO, 2-17, p.123
Titanium plate for reactor vessel, TO, 2-3, p.107
Titanium sponge demand drops, melt and mill capacity rises, 3-24, p.62

Tool Steels:
A guide to tool steels and carbides, 1-21, p.97
Use steel "LaBelle HT," TO, 5-12, p.85
Shipments, (1957-1954), 2-17, p.180

Tooling:
Forum on technical progress, TO, 1-6, p.330

Tools & Dies:
Industry report, 2-10, p.45 and 5-12, p.39
See Plastics

Tools (Cutting):
Barriers to faster cutting-super speeds (ASTE report), 5-5, p.100
Cutting tools, industry report, 2-17, p.81
Disposable cutters, GE, 3-10, p.141
Key to disposable cutters, 2-17, p.136
Machining speeds: Workpieces shot out of rifle graze cutting tools, 1-14, p.139
Speed boost cuts tough metals, 6-2, p.88
Throwaway cutters boost speeds, 5-5, p.86
See Power Tools

Trademarks:
Trademarks help you sell, 3-17, p.54

Training:
GE machinability program, 3-10, p.144
Numerical controls, operators trained, 6-16, p.52
Westn-GE engineering course for customers, 3-17, p.45

Transportation:
1956 outlook, 1-6, p.110; 2-17, p.77
Total transportation up, 1-27, p.32

Trucks, Tractors:
British "crawler hose," TO, 6-2, p.65
Gas turbine tractor test, 5-19, p.164
Truck sales slow down, 6-9, p.69

Tubing: See Pipe, Tubes, Fittings:

Tumbling:
AiResearch use for small parts, 3-24, p.90
Tumbling table, Convair, TO, 6-9, p.87
Vibration aids tumbling, 3-24, p.109

Turbines:
Extrusion slashes turbine rotor wheel assembly costs, 5-5, p.88
Gas turbine parts of Chromoloy heat treated, 5-26, p.102
Gas turbine tractor tested, 5-19, p.164
GE turbine blades: Roll forming gets an assist, 6-2, p.70

University of Virginia:
Professor reports steelmaking facilities, 1-13, p.10

Uranium:
Production up, 3-3, p.63

U

UAW: See Labor

Ultrasonics:
Deburring with ultrasonic, 4-7, p.102
Ultrasonic welding makes rapid advances, 3-31, p.81
Welds foil in continuous seams, TO, 6-9, p.87
Welded tubing tests, 1-20, p.72

Unemployment:
See Employment Unemployment

Unemployment Compensation:
1st half, system faces test, 3-3, p.47
Jobless pay from States (chart), weekly benefits, 4-21, p.61
Jobless pay reserves high, 3-5, p.45
Jobless pay rolls drop, 6-2, p.29
New York law hikes pay, 5-5, p.46
See SUB

Unions: See Labor

University of Michigan:
1970 steel capacity, Prof. Cowan predicts, 6-16, p.41
Dr. Riegel study: Managers' relations with engineers, 4-21, p.67

Used Machine Tools:
Dealers demand depreciation provisions and stop to gov't dumping of surplus machines, 6-2, p.59

V

Vacations:
Vacation trends, AIC survey, 6-2, p.29
Plant schedules, 6-30, p.77

Vacuum:
A critique of vacuum methods (status of vacuum melting in U. S.), 1-13, p.79
Electron beam melting purifies alloys, 3-24, p.108
Vacuum melted alloy new, GE's J-1300, 3-24, p.130

Venezuela: See South America

Vessels: See Pressure Vessels

Vibration:
Vibration aids tumbling (Vibra-finish), 3-24, p.109
Vibration speeds finishing (Lor-cote), 6-9, p.110
Vibration detector, 5-5, p.89

Virginia:
Virginia steel sites, 1-13, p.10

W

Wages:
Annual hourly at GM, 2-24, p.30
Average hourly, Cleveland area, 3-10, p.74
Average hourly steelworkers, 6-16, p.41; 5-12, p.39
Auto-UAW: Productivity key factor in measuring wage and fringe increases, 3-31, p.49
Construction pay, 6-2, p.37
IBM hourly workers on salary (bluecollars go white), 4-7, p.61
Metalworking wages & hours, 1-6, p.108
Minneapolis-Moline, UAW agreement; Wage hike deferred, 4-7, p.67
Steel, cost-of-living increases, 2-3, p.103
Steel payroll, 2-24, p.56; 5-12, p.46
Supervisors, offices and foremen, 4-14, p.90
Wage gains, BNA report, 2-3, p.57
Wage-price rise (1948-1956), 5-12, p.46
Whitecollar salaries in basic steel, 3-24, p.66
Whitecollar wages rise, 1-13, p.45

Warehouses:
ASWA convention: Steel warehouse '70 style, 5-12, p.119
Evolution in warehouses (Solar Steel's Friedman reporter), 2-17, p.83
Cline Steel: Stripper cuts costs of handling coiled strip, 1-27, p.78
Pesco Products automatic warehouse diversifies into material handling, 5-12, p.55
U. S. Steel-Birmingham, 3-31, p.73

Warehousing, Distribution:
Finished steel market class., 1-6, p.167; 3-10, p.164
Steel consumers, where they are: U. S. Census figures show distribution pattern, 1-20, p.46
See Inventories

Washer Springs:
Springs fit tight spots, 3-10, p.118

Wastes:
Disposing of radioactive wastes, TO, 3-10, p.121
Phenol as polluting agent, TO, 1-13, p.69

Water Glass:
Water glass coatings solve heat treat problem of alloys, 6-23, p.100

Welded Steel Tubing:
Four steps for using welded tubing, 4-28, p.100
Ultrasonic tests for welded tubing, 1-20, p.70

Welding (Arc):
Automatic arcwelding process (Innershield), 5-12, p.102
Automatic-portable welder joins tubes and sheets, tungsten arc method, 2-10, p.78
Hardsurfacing heavy field equipment, 4-28, p.103
Lightweight gun speeds CO_2 welding, 6-16, p.118
Semiautomatic pipe welder-Unionarc, cost cutting, 6-9, p.88
Submerged arc cuts weld costs cused for tanks), 1-13, p.76
Submerged arc welding gets boost, Lincoln Elec., 4-7, p.119

Welding (Gas):
Kaiser upgrades aluminum welding (new gun and three methods), 3-24, p.128
Rings in pipe welds eliminated by machining tech., 3-31, p.100

Welding (General):
Atomic reactor vessel, consumable inserts, 5-19, p.159
Automatic welder saves 66% (Gusset Boiler tanks), uses submerged arc and manipulator to replace hand methods, 2-24, p.72
Automatic weld (steel wrapper for stator cores) uses argon and sigma welded to replace hand methods, 3-10, p.142
How to weld copper and its alloys, 1-27, p.86; 2-24, p.90; 3-17, p.110; 3-3, p.106; 3-26, p.122
Tackwelding motor bearing brackets before boring, 2-10, p.96
These devices turn "bits" into dollars (positioners and manipulators), 5-26, p.104
Ultrasonic welding makes rapid advances, 3-31, p.81
Welding wire (Inco), nickel steels, 4-14, p.94

Welding (Resistance):
Welded fastener cuts cost of machine, 4-21, p.142

Welding (Spot):
Midget spotwelder packs wallop (joins fine wires and foils), 6-2, p.87

Welding (Stud):
Studs welded to outside of cooling coil, Sun Oil refinery, 2-24, p.80

Welding Equipment:
Industry report, 3-10, p.81

West Coast:
Watch the West Coast, growth area, 5-5, p.34
West Coast steel mills, 3-24, p.59

Wind Tunnels:
Convair builds wind tunnel, 4-7, p.59

Wire:
Aluminum-clad wire, 5-12, p.100
Conductor wire plated continuously, 3-24, p.118
Filler wire for missile welds, TO, 1-27, p.71
Inco develops welding wire, 4-14, p.94
J&L stainless steel wire, Detroit mill opens, 4-14, p.113
Lock coil cable, pic., 5-12, p.76
Magnet wire takes heat, 5-12, p.100
Merchant wire, foreign competition, 1-27, p.105
Pickling stainless wire and strip, 4-14, p.141
Porcelain enamel coated electric wire, 6-30, p.79
Stainless spring wires, properties, 6-16, p.120
Steel wire product, industry report, 6-23, p.127
Wire cloth finds new jobs, industry report, 3-3, p.58
Wire rope sales lag, 3-31, p.117

Wire Reinforcement Institute Inc.:
Elects, B, 5-12, p.82

Wrenches:
Counterbore technique, TO, 2-24, p.69

Wrought Iron:
Byers adds wrought iron, 4-D, 2-24, p.41

X

X-Ray: See Inspection, Testing

Z

Zinc: See Lead-Zinc

COMPANY INDEX

A

ABC Die Casting Machine Co.:
Diecasting machine. IE, 2-3, p.149

Abrading Systems Co.:
Lens grinder finishes steel or plastic. IE, 3-31, p.104

Abrasive Machine Tool Co.:
Automatic grinding cycle. IE, 6-9, p.124
Knife grinder. IE, 2-3, p.146

ACF Industries Inc.:
Grey iron foundry. B, 3-31, p.70

Acme Steel Co.:
Flower strapping tool. IE, 1-7, p.128

Aeromark Co.:
Aeromarker. IE, 1-7, p.128

Addressograph-Multigraph Corp.:
Leases Australian firms. B, 6-16, p.79

Aeronautronic Systems Inc.:
Expands. B, 3-31, p.87

Aetna-Standard Engineering Co.:
Rolling mill order. TO, 2-3, p.97

Ahlberg Bearing Co.:
Sold. B, 3-31, p.70

Ainsworth-Precision Castings Co.:
Forging division. 3-10, p.113

Air Reduction Sales Co.:
Arc welding assembly. IE, 3-10, p.132
Liquid oxygen plant. B, 6-30, p.77

Airborne Instruments Laboratory:
Control to 50 millionths on centerless grinder. 3-24, p.110
Sold. B, 1-7, p.66

Air Hydraulic Inc.:
Air-powered index table. IE, 6-23, p.115

Airline Welding & Engineering Corp.:
Mandrels heating. IE, 3-10, p.177
Welding positioner. IE, 6-2, p.94

Airmotive Machining & Engineering Corp.:
New name. B, 3-5, p.70

AiResearch: See Garrett Corp.

Alan Wood Steel Co.:
Expansions, aid to future growth. 3-10, p.83
Fireproof hydraulic fluid. 2-3, p.117
Iron powder plant. 1-28, p.83
Steel price increase expected. 6-30, p.43

Albi Mfg. Co.:
Ingot mold coating. TO, 6-23, p.89

Alcar Instruments Inc.:
Sold. B, 5-26, p.90

Alco Products Inc.:
Modernization program. B, 5-26, p.85

Allegheny Ludlum Steel Corp.:
Electrical strip steel new. 6-23, p.107
Looking inside stainless ingots: Fulton and Henke. 2-17, p.132
New alloys offered. 5-26, p.117
Quality control in valve steels. 1-28, p.106

Allied Chemical & Dye Corp.:
Change of name. 4-21, p.85
Hydrofluoric acid plant. B, 3-10, p.107
Sulfuric acid plant. N. J., 1-27, p.68

Allied Products Corp.:
Buys Pressed Metal plant equipment. 5-12, p.73

Allied Research Products Inc.:
Buys assets of Wagner Bros. 6-23, p.78
Coating protects metals. IE, 3-10, p.134
Iridite, cadmium plate brightener. IE, 5-5, p.112

Alling-Lander Co.:
Special machines cut gear costs. 4-14, p.136

Allis Co., Louis:
Gear reducer unit. IE, 5-26, p.145
Pancake motor. IE, 2-3, p.150
Weatherproof motors. IE, 3-17, p.124

Allis-Chalmers Mfg. Co.:
Automatic-portable welder joins nonferrous tubes and sheets. 2-10, p.78
Ball mill stopped. 4-7, p.92
Buys Mapo-Precision line. 3-24, p.84
Gas turbine tractors. 5-5, p.109
3-10, p.164
Motor-in-plate tool combination. 1-27, p.42
Portable generator for emergency. IE, 6-23, p.121
Punch cures wet quality control. 3-10, p.122
Tri-Lift mast. IE, 6-2, p.92
Water cooled, spindle motor dev. 1-20, p.39

Allison Steel Mfg. Co.:
Kaiser stock purchase. B, 6-9, p.81

Alloy Metal Products Inc.:
Scrap processing plant. B, 3-17, p.81

Alpha Press & Machine Inc.:
Hydraulic shear. IE, 1-20, p.87

Alter Co.:
Scrap processing plant. B, 3-17, p.81

Aluminium Ltd.:
Launches aluminum carrier. B, 6-9, p.81

Aluminum Co. of America:
Alloy No.157 new. TO, 3-24, p.102
Brake uses 7-cm plates. 6-23, p.93
Buys transformer div., B, 5-12, p.79
Diecasting, 3-3, p.127
Pothlines, Massena, 6-30, p.44
Sales program. 5-5, p.148

Aluminum Tubing Co.:
Renamed. B, 1-13, p.66

Alva Allen Industries:
Mill attachment. IE, 6-2, p.94
Press. IE, 6-23, p.118
Punch press. IE, 2-4, p.144; 2-17, p.158

Amchem Products Inc.:
Name change. B, 5-12, p.76

American Air Products Corp.:
Obismobile "Lucille." 6-23, p.62

American Bosch Arma Corp.:
AF contract for guidance system. 3-31, p.75
Harder stainless practice-nitriding. IE, N. Libsch, 6-30, p.85

American Brake Shoe Co.:
Closes Toledo foundry. 3-24, p.92
Denison presses speed assembly; rivets secured in cabinet hinges. 6-30, p.96
Rotary compressor. IE, 1-6, p.457

American Brass Co.:
Expands Buffalo plant. 6-2, p.62

American Can Co.:
Shearing line. Hammond, Ind., 6-30, p.76

American Chain & Cable Co., Inc.:
Allison-Campbell div. consolidates. 3-10, p.107
Cutting unit. IE, 2-17, p.154
Wilson-hardness tester. IE, 6-16, p.124

American Gas Furnace Co.:
Muffle furnaces, hydrogen atmosphere. IE, 6-9, p.129

American Hard Rubber Co.:
Acid pump. IE, 1-28, p.128

American Hoist & Derrick Co.:
Crosby steel hooks. 1-20, p.85

American Latex Products Corp.:
Metal filled epoxy resins. IE, 5-19, p.168

American Machine & Foundry Co.:
Cost crisis: Welsbach fosterer cuts cost of machine. 4-21, p.142
Cutter deburrs and trims. IE, 4-21, p.166
Missile gas officers. 3-17, p.71

American Malleable Castings Co.:
Makes pearlitic malleable. B, 6-2, p.62

American Metal Climax Inc.:
Mob plant. 5-12, p.17

American Meter Co. Inc.:
Negotiates for Buffalo Meter. B, 6-23, p.78

American MonoRail Co.:
Buys Tipp Mfg. B, 4-28, p.85

American Motors Corp.:
Antitrust hearings. 2-17, p.85; 3-10, p.73
Earnings. 4-14, p.50; 5-5, p.78; 5-26, p.66; 6-9, p.56
Employee stock program. 5-5, p.48
Mighty Mite Army truck. 4-7, p.56
Rubber Ambassador. inc., 1-27, p.42
Rubber Ambassador prices. 1-20, p.50
Rubber production upped. 5-12, p.40
Sales comeback gamble again. 3-17, p.53
Sales 1st six months. 4-14, p.100
Stock disposal is Wolfson. 6-30, p.64
Wage freeze other demands sought from UAW. 4-14, p.85

American Potash & Chemical Corp.:
Merges Lundsay. B, 3-17, p.78; 3-26, p.90

American Powdered Metals Inc.:
Buys Yale & Towne plant. B, 6-23, p.79

American Pulley Co.:
Acquires Hubbell Steel. B, 1-27, p.69

American Pulverizer Co.:
Scrap crusher. IE, 6-30, p.113

American Rectifier Corp.:
Rectifier. IE, 6-9, p.131

American Smelting & Refining Co.:
Copper melt furnace. B, 2-24, p.63
Copper rolling mill, cakes 25 ft long, 36 in. wide. 4-7, p.129
Electric melting fire furnaces for copper. 2-10, p.100
Price cuts. 4-14, p.79
Sells Garfield copper smelter. B, 5-12, p.73

American Steel Inc.:
Expands. B, 3-17, p.75

American Steel & Pump Corp.:
Buys Industrial Brownfoust. 2-24, p.63

American Steel Foundries:
Hydraulic press. IE, 6-30, p.106
Plant expansions. 2-3, p.75

American Welding & Mfg. Co.:
Reorganizes. B, 6-16, p.75

Ampco Metal Inc.:
Dedicates foundry, Tex., B, 6-16, p.82

Anaconda Wire & Cable Co.:
Builds plant, Ga., B, 2-3, p.65

Annis Co., R. B.:
Demagnetizer. IE, 3-10, p.152

Arcair Co.:
Torches. IE, 2-10, p.156

Archer-Daniels-Midland Co.:
Rights Wyo. plant for bentonite. 1-20, p.63

Arcweld Mfg. Co.:
Oxygen rupture tester. IE, 2-24, p.165; 6-30, p.111

Argonaut Corp.:
Adds limousine line. 4-14, p.100
Lantz reports cuts. 3-17, p.58

Armco Steel Corp.:
National Supply merger approved. 1-28, p.82; proposed, 2-24, p.30
National Supply to supply steel mill. 5-26, p.90
Scrap grinding, three w/ 6-9, p.56
Sheffield rod mill, Kansas City. 1-28, p.85
Sheffield's Scale weighing hot metal spill rate. 1-27, p.58
Stainless forging, brass, precise control. 6-30, p.92
Wire strip mill. 6-9, p.81

Aronson Machine Co.:
Vertical turning rolls. IE, 3-31, p.107

Arter Grinding Machine Co.:
Cools. B, 4-14, p.122

Arvin Industries Inc.:
Vocational training. IE, 1-20, p.88

Associated General Contractors:
Brand considers aeronautic, 3-10, p.92

Associated Missile Products Co.:
AMP subsidiary. 3-17, p.71

Astrodyne Inc.:
Solid propellants. 3-3, p.84

Atlantic Coast Industries Inc.:
Corporate name commences. B, 2-10, p.71

Atlas Press Co.:
General purpose shaper. IE, 3-10, p.142

Austin Co.:
Business outlook. 1-7, p.55

Automatic Electric (Canada) Ltd.:
Press flexibility boosts output. 3-10, p.128

Automatic Transportation Co.:
Hand trucks. IE, 6-16, p.124
Heavy-duty platform trucks. IE, 3-10, p.166
Pallet stacker. IE, 2-3, p.166
Safety brake truck seat. IE, 6-2, p.94
Side shifting fork truck. IE, 5-19, p.171

Automation Devices Inc.:
Vertical elevating conveyors. IE, 3-10, p.158

Avco Mfg. Corp.:
Shore Hight promoted. 1-13, p.39
Ultrasonic tester. TO, 3-3, p.93

B

B & F Machinery Co.:
Ram for press advances at high speed. IE, 5-12, p.110

Babcock & Wilcox Co.:
Tests air tube soles. 1-20, p.72

Bailey Meter Co.:
Combustion analysis equipment. 5-26, p.108

Baird-Atomic Inc.:
Spectrograph for production. IE, 3-17, p.124

Baird Machine Co.:
Multispindle lathe. IE, 4-28, p.130
Wire formers. IE, 2-24, p.162

Bakelite Co.:
Epoxy-Alloy plastic die. 2-24, p.76

Baldwin-Lima-Hamilton Corp.:
Standard Steel Wks.: Natural gas firing catalyze fuel-combustibles boom, 5-26, p.108
Test lab. Hamilton plant, B, 5-19, p.113
Tester, IE, 4-7, p.126

Bal-Tate Furnace Co.:
Liquid glass bath for heating ingots before extrusion, TO, 3-24, p.103

Barber-Greene Co.:
Affiliates C & S Products, 1-27, p.98

Barium Steel Corp.:
Steel plant site purchased, 6-9, p.90

Barrett-Cravens Co.:
Platform truck, IE, 4-14, p.176

Barry Controls Inc.:
Buys Viber Eng., B, 3-17, p.78

Basic Products Corp.:
Buying Solar Electric, B, 4-7, p.90

Bassick Co.:
Inconel heat treating baskets mean cost savings, 3-31, p.86

Bausch & Lomb Optical Co.:
Consolidates Applied Research, 4-28, p.88
Gage series, IE, 6-30, p.111

Bausenbach, Arthur L.:
Hydraulic presses, IE, 3-24, p.131

Beckman Instruments Inc.:
Monitor system, 4-14, p.113

Behr-Manning Co.:
Cutter abrasive Machine Show, 6-30, p.92

Bell Aircraft Corp.:
Missile projects, 1-13, p.41
Sales-activities, B, 3-10, p.110

Bellevue Porcelain Enameling Co.:
Cutaway billet cleaner saves time, 4-7, p.106

Beloit Iron Works:
Forms division-formed, 3-17, p.71

Bendix Aviation Corp.:
Abrasive pellets drives barrel finishing problem, 6-30, p.96
Bendix Filter, name change, 4-21, p.5
Numerical control, milling machine, 4-21, p.165
Operator training for numerical controls, 8 hrs. shift with white collars, 6-16, p.92

Benjamin Franklin Graphite Co.:
Purchased from GSA, 5-19, p.113

Besly-Welles Corp.:
Tap cold forms threads, 5-12, p.106
Tap swages thread, 2-10, p.92

Bethlehem Pacific Steel Corp.:
West Coast expansions, 5-5, p.54

Bethlehem Steel Co.:
Annual report, 3-31, p.59
Blast furnace tuyeres, TO, 1-27, p.71
Buffalo union co-op, 1-20, p.29
Iron ore div., Ozarks, 2-10, p.38
Layoffs, find work at Chevvy plants, 2-3, p.69
Merger: Court denies motion for summary judgment, 1-20, p.37
Skyscraper columns for Chase Manhattan office, 4-14, p.113

Beverly Shear Mfg. Co.:
Nibbling shear, IE, 1-28, p.128

Big Joe Mfg. Co.:
Battery operated lift truck, IE, 5-26, p.142

Bijur Lubricating Corp.:
Automatic oiling, IE, 4-14, p.167
Spraymist coolant, IE, 3-3, p.135

Binks Mfg. Co.:
Exhaust fans, IE, 2-3, p.136
Spray gun, IE, 1-13, p.96

Bix Co.:
Heat treat basket, IE, 2-24, p.102

Black & Decker Mfg. Co.:
Magnetic drill press, IE, 6-9, p.124

Black Drill Co.:
Alloy tool bits, IE, 1-20, p.87

Blaw-Knox Co.:
Metal withstands creep, 6-16, p.121
Remote control, car carries ingots to slab mill, plec., 2-7, p.64

Bliss Co., E. W.:
Closes press plant, 5-5, p.70
Dies handled safely, IE, 5-12, p.110
Presses, IE, 1-6, p.160; 1-20, p.85; 2-17, p.160; 3-3, p.137; 3-24, p.131; 5-5, p.115; 6-9, p.126; 6-16, p.128

Bliss & Laughlin Inc.:
Buys site, B, 4-27, p.98

Boeing Airplane Co.:
Bomarc (AF missile) of magnesium-thorium, 2-17, p.148
Rivet shaver for sheet metal surfaces, 6-9, p.108
Water glass solves heat treat problem, 6-23, p.100

Bohn Aluminum & Brass Corp.:
Buys Plastray, 2-3, p.97

Bollier-Dunwell Inc.:
Trevor div., B, 2-3, p.97

Bond Foundry & Machine Co.:
Rubber tired wheels, IE, 2-3, p.140

Borg-Warner Corp.:
Buys Pierson Eng., B, 4-7, p.94
Central office moved, B, 6-16, p.84
Ingersoll crane div. renames, 5-5, p.79
Pesco Products automatic warehouse, 3-17, p.55
Pesco L. A. branch, B, 6-16, p.75

Bostrom Corp.:
Name change, B, 6-16, p.75

Bosworth Mfg. Co.:
Magnetic conveyor, IE, 6-9, p.128

Bowser Inc.:
Finishing dept. modernized, 3-17, p.107

Bound Brook Oil-Less Bearing Co.:
Powder metallurgy plant, 3-10, p.116

Bozar-Schultz Corp.:
Tapping machine, IE, 6-9, p.128

Boyles Galvanizing Co.:
Buys Jarrett Plating, 3-10, p.113

Brainard Steel: See Sharon Steel

Branson Instruments Inc.:
Pitrisonic gage, IE, 3-10, p.151

Brooks Oil Co.:
Stoves collapses, 2-3, p.94

Brown & Sharpe Mfg. Co.:
125th anniversary: Programs for progress, re-equipment, 5-19, p.151
Buys Double A Products, 1-27, p.67
Cutting tool div., B, 4-21, p.88
Forms hydraulics div., 3-10, p.110
Grinding machine combination: Milliamths made easy, 5-19, p.148

Brown Thermal Development Co.:
Cupola heating unit, IE, 4-7, p.126

Brush Beryllium Co.:
Buys Penn Precision, 2-24, p.63

Bryant Machinery & Engineering Co.:
Merges, 2-3, p.97

Buck & Associates, Carl:
Heat exchangers, IE, 4-28, p.129
Pumps acidproof, IE, 6-9, p.124

Buck Mfg. Co.:
Drill press feed, IE, 4-21, p.171

Buck Tool Co.:
Chuck takes up for wear, IE, 3-31, p.108

Buckeye Tools Corp.:
Portable drill, IE, 2-17, p.152

Buhr Machine Tool Co.:
Large-versatile machine, IE, 5-19, p.168

Bullard Co.:
Air gage checks hub, 6-9, p.113
Drive for machine tools, constant horsepower, 4-14, p.154

Burgmaster Corp.:
Turret drill, six-spindle, IE, 5-26, p.129

Burklyn Co.:
Feeders, IE, 3-10, p.151

Bushings Inc.:
Reduced costs keep foundry competitive (cost crisis), 5-19, p.136

Byers Co., A. M.:
Wrought iron 4-21, new dev., 2-24, p.41

C

C & D Batteries Inc.:
Control system, 4-7, p.94

Cady Metal Fabricating Co.:
Pallet lifter for heavy materials, IE, 5-26, p.132

Caine Steel Co.:
Stripper cuts handling costs, 1-27, p.71

Cal-Testing Machine Co.:
Calitester, IE, 5-26, p.126

Calumet & Hecla Inc.:
Wolverine renovates Detroit plant, 1-13, p.38
Wolverine tube mill, 4-28, p.83

Cambridge Corp.:
Airborne double wall tank for AF, 4-7, p.94

Cammann Mfg. Co. Inc.:
Hand metal cutter, IE, 3-3, p.112

Cannon-Muskegon Corp.:
Vacuum-melter, 5-ton new, Pete 41, 5-5, p.104

Capco Products:
Horizontal tapper, IE, 3-10, p.152

Capital Brass & Aluminum Foundry Co.:
Buys Smooth-Harwood, 3-24, p.100

Carborundum Co.:
Abrasive belts cut roll grinding costs, 3-31, p.92
Abrasive line added, B, 4-28, p.89
Curtis Vers-i-Mite grinder, IE, 3-17, p.108
Roll grinding attach., IE, 2-3, p.138

Carlton Machine Tool Co.:
Drilling-boring machine has vertical spindle, IE, 3-3, p.113

Carpenter Steel Co.:
Jet engine alloy, Lapelloy, C-9, 5-5, p.104
New tools aid corrosion research at Lab, 6-23, p.88
Palmer reports intensifies to recession recovery, 3-3, p.57
Trucks steel; coiled strip steel drying, 5-19, p.146

Carrier Corp.:
Machine cuts air conditioning duct costs, 2-3, p.125
P.A.'s beat cost crisis, install new equipment, 3-17, p.16

Case Co., J. I.:
Tractor loader, IE, 1-6, p.153

Casting Engineers Inc.:
Investment castings outlook, 1-27, p.31

Castle & Co., A. M.:
Buys Nottingham Steel, 6-9, p.84

Caterpillar Tractor Co.:
Layoffs, 4-day workweek, 1-13, p.55
Precision metal forming machines, 2-10, p.79

Ceco Steel Products Corp.:
Will make steel, 5-12, p.47

Celcote Co.:
Gas scrubbing towers, IE, 4-14, p.180

Cenco Instruments Corp.:
Merges Consolidated Electrodynamics, 2-3, p.97

Cen-Tee Corp.:
Organized, B, 5-12, p.76

Chain Belt Co.:
Madison, Ind., plant plans, B, 6-16, p.82

Chainveyor Corp.:
Conveyor rack moves non-shaped parts, 3-31, p.96

Chambersburg Engineering Co.:
Device cools hammer, IE, 6-23, p.118
Drop hammer, 3-3, p.127

Champion Motors Co.:
Renamed, B, 5-5, p.76

Chance Vought Aircraft Inc.:
Foundries contracted for research, 4-7, p.89
Production plans: Ingenuity pays off, 3-10, p.142

Charleston Rubber Co.:
Charcote, IE, 4-7, p.128

Chase Brass & Copper Co.:
Bronze alloy Silmic high strength, 5-12, p.102

Chelsea Fan & Blower Co.:
Fan models, IE, 3-10, p.152

Chemetron Corp.:
Electronic controls flame cutter, 5-26, p.111
Formerly National Cylinder, 4-7, p.90; 4-21, p.85

Chemical Milling Corp.:
Chemichlorine plant, Inc., 3-31, p.76

Cherry-Burrell Corp.:
Moves plant to Iowa, 1-13, p.66

Chicago Bridge & Iron Co.:
Wind tunnel control, Convair, 4-7, p.94

Chilton Metal Products Inc.:
New plant, B, 4-28, p.90

Chromalloy Corp.:
Chromilizing process for steel, 5-5, p.90
Patent rights, B, 3-31, p.72

Chrysler Corp.:
1958 gimbles, Colbert keeps designer Exner, 2-3, p.77
1959 model features, 5-12, p.60
Army truck-chrome contract, 1-13, p.100
Corporate groups (three) formed, 3-5, p.66
Heat treating, two steps in six mins, 6-16, p.101
Plutonium ends, 2-10, p.57
Strike possible over work standards and hours, 3-5, p.17

Cincinnati Grinders Inc.:
Precision grinders, IE, 6-23, p.116

Cincinnati Lathe & Tool Co.:
Driller machines, IE, 3-31, p.108

Cincinnati Milling Machine Co.:
Forms Cimastra div., B, 3-17, p.71
Spindle nose, IE, 2-3, p.116

Cincinnati Shaper Co.:
Press brake uses 7-in. plates, 6-23, p.95

Circle Wire & Cable Corp.:
Tubing plant, electroid metallic, B, 6-2, p.63

Cisco-Rex Steel Co.:
Plastic-coated metals, 4-7, p.104

Clark Equipment Co.:
Buys Brown Trailers, 3-3, p.90
Fork trucks, IE, 3-17, p.120
Gas truck sparkproof, IE, 5-19, p.180
Hand lift trucks, IE, 1-13, p.96; 6-16, p.124
Layoffs, 1-13, p.55
Western Union wire links plants and dealers, speeds deliveries, 3-10, p.83

Clarkson Laboratories Inc.:
Weld-Gard, stops spatter adhesion, IE, 6-16, p.128

Clayton Mfg. Co.:
Combination cleaner, IE, 1-27, p.94

Clearing Machine Corp.:
Unitized press drive, IE, 5-26, p.145

Cleveland Automatic Machine Co.:
Diecasting machine hydraulic, IE, 3-17, p.120

Cleveland Cap Screw Co.:
Cap screws, IE, 1 6, p.157
Cold forged hex head bolts, 1 28, p.112

Cleveland-Cliffs Iron Co.:
Iron ore lease, Quebec, 3 3, p.18

Cleveland Crane & Engineering Co.:
Motor-pulled tractor, IE, 5 26, p.129
Tractor pulls carriers, IE, 5 26, p.129

Cleveland Electric Illuminating Co.:
Gundseth, addresses AMA, 5 26, p.63

Cleveland Fuel Equipment Co.:
Renamed Cleveland Controls Inc., B, 3 17, p.71

Cleveland Pneumatic Industries:
Buys Renco-Toledo, B, 5 12, p.81

Cleveland Punch & Shear Works Co.:
Press safety, IE, 5 12, p.112

Climax Molybdenum Co.:
Coldwater, Mich., plant, 5 12, p.47
Vapor deposition processes, 6 30, p.96

Cochran Foil Co.:
Expands, B, 5 12, p.76

Cochrane Corp.:
General Waterworks buys interest, 5 5, p.79

Coil Winding Equipment Co.:
Bobbin winder, IE, 2 3, p.143

Colonial Broach & Machine Co.:
Tool and cutter grinder, IE, 5 5, p.111

Colorado Fuel & Iron Corp.:
Camera checks furnace linings, 6 2, p.74
Double coding bell for continuous rod mill, 2 24, p.75
Workers recalled, 2 24, p.30

Colson Corp.:
Platform truck, handles removable, IE, 3 31, p.104

Columbia Gas Systems:
See Ohio Fuel Gas

Commercial Filters Corp.:
Buys Industrial Filtration, B, 6 23, p.81
Filter, IE, 4 14, p.167

Commonwealth Edison Co.:
Zirconium tubing order, B, 3 31, p.75

Composite Forgings Inc.:
Expands div., B, 3 24, p.80

Computer-Measurements Corp.:
Electronic gage, IE, 3 10, p.154

Conax Corp.:
Thermocouple, IE, 3 3, p.134

Cone Automatic Machine Co.:
Co-op machining program, 6 16, p.115

Consolidated Controls Corp.:
Expands, 1 27, p.65

Consolidated Electrodynamics Corp.:
Box protects oscillograph records, TO, 3 10, p.121
Hitemp licensing, B, 4 21, p.85
Merger negotiations, 2 3, p.97
called off, 3 10, p.113

Consolidated Machine Tool Co.:
Billet scalper cuts billets for rolling alum. sheets, 4 14, p.152

Continental Can Co.:
Closes Syracuse plant, B, 5 12, p.73

Continental Machine Co.:
Cutoff wheel grinder, IE, 3 31, p.108

Continental Motors Corp.:
Barrel finishing, 5 12, p.99

Continental Oil Co.:
Data processing contract, 4 7, p.94

Controls Co. of America:
Buys Breese assets, 4 7, p.95
Buys Hetherington, 1 27, p.69

Control Systems Co.:
Formed, B, 4 21, p.67

Convair: See General Dynamics

Conversion Chemical Corp.:
Agent for cadmium, IE, 5 5, p.120

Copperweld Steel Co.:
Allmoweld profile new, 4 7, p.96
Better tube mandrel, Seamless Tube Days, 6 16, p.122
Expansion program, a look ahead, 2 10, p.53

Corhart Refractories Co. Inc.:
Glass tubes form cores, 6 23, p.96
Refractory units consolidate with Corning Glass, 6 2, p.62

Corning Glass Works:
Refractory units join with Corhart, 6 2, p.62

Coulter Machine Co., James:
Threading lathe, IE, 1 27, p.96

Crandall Engineering & Mfg. Inc.:
Barrel finisher, IE, 2 17, p.134

Crane Co.:
Layouts, how to handle, 2 3, p.69

Crosby-Laughlin: See American Hoist

Crouse-Hinds Co.:
Tipped inserts cut costs, 6 23, p.107

Crown Controls Co. Inc.:
E-Z lift, IE, 3 10, p.152

Crucible Steel Co. of America:
Export subsidiary, B, 1 20, p.62
New die steel, TO, 5 12, p.89

Cummins Engine Co. Inc.:
Buys Atlas Crankshaft, 3 10, p.113

Cunningham Co., M. E.:
Stamping holders, IE, 2 10, p.106

Curtis Machine: See Carborundum

Curtis Screw Co. Inc.:
Sold, B, 3 17, p.71

Curtiss-Wright Corp.:
Space age metals, preview, 5 5, p.89

Cutler-Hammer Inc.:
Airborne acquisition, 3 31, p.75
4 7, p.95, 6 16, p.79
Safety switches produced, B, 6 2, p.63

D

Dana Corp.:
Buys Chelsea Products, 1 28, p.88
Cost crisis machine doubles up on grinding, 6 30, p.80
Parish Pressed Steel, Lightweight gun speeds CO_2 welding, 6 16, p.118
Resumes parts division, B, 3 10, p.107

Dave Steel Corp.:
Name change, B, 6 9, p.84

Davey Compressor Co.:
Rotary compressors, IE, 1 6, p.165, 6 30, p.113

Davis Aircraft Products Inc.:
Seeks defense contract, 3 17, p.50

Davis Keyseater Co.:
Purchased, 3 17, p.75

Davison Chemical Co.:
Nuclear fuel materials at new plant, Tenn., 3 24, p.97

Dayton Steel Foundry Co.:
Buys Sterkel Tandem, 5 26, p.90

Deere Harvester Works, John:
Steel pellets handle engines, 6 2, p.77

Defiance Machine & Tool Co.:
Keyboard machine marks wire and tubing, IE, 2 17, p.151

Delta Design Engineers Inc.:
Aligns railroad track for supersonic rocket sleds, 3 17, p.99

Denison Engineering: See American Brake Shoe

De Silvey Corp.:
Turret lathe, IE, 4 28, p.127

Detrex Chemical Industries Inc.:
How to test solvent quality: Dr. C. E. Kircher, 1 13, p.86

Detroit Edison Co.:
Appliances forecast, 2 24, p.56

Detroit Gray Iron & Steel Foundries Inc.:
Name change, B, 5 19, p.113

Diamond Alkali Co.:
Desulfurizing reactor for pig iron, 3 10, p.121

Diamond Machine Tool Corp.:
Punch press, Multi Max, IE, 6 2, p.91

Die & Automation Inc.:
Standardized Press-Matic units, 4 7, p.125

Dietert Co., Harry W.:
Super-temp furnace, IE, 1 13, p.96

Dixon Automatic Tool Inc.:
Feeder-air operated, IE, 6 16, p.128

Dixon Crucible Co., Joseph:
Graphite-silicone paint, IE, 4 7, p.126

DoAll Co.:
Band mill, IE, 1 13, p.90

Dodge Mfg. Corp.:
Conveyor drive, IE, 3 10, p.156

Dodge Wire Corp.:
Buys welding machines, B, 1 27, p.66

Dochler-Jarvis:
Bonding cleaner aluminum nitride wheels to cast iron brake shoe liners, BMI, 1 14, p.157
Cadillac's grille, cold impact extruded, 2 17, p.87

Dominion Foundries & Steel Ltd.:
Coke ovens, 2 3, p.65

Donner-Hanna Coke Corp.:
We have plenty of good coking coal: P. S. Savage, 2 24, p.78

Douglas Aircraft Co.:
Nike Hercules for Army, 2 24, p.36

Dow Chemical Co.:
Buys Extruders Inc., 5 5, p.80
Dowell a division, B, 6 2, p.62
Electroless plate for magnesium, TO, 6 9, p.87
Magnesium works shutdown, Velasco, Tex., 3 10, p.100

Drake Corp.:
Tool grinder for large saws, IE, 6 23, p.118

Dravo Corp.:
Buys Graham Works, B, 4 28, p.85

Dreis & Krump Mfg. Co.:
25-ton press brake, IE, 3 24, p.138
Steel-bender, IE, 6 9, p.132

Dresser Industries Inc.:
Elgen stock exchange, B, 3 31, p.76

Drillmation Corp.:
Heavy-duty power drill, 6 23, p.104

Duff-Norton Co.:
Cutting boosts portable, IE, 4 14, p.164

Du Pont de Nemours & Co., E. I.:
Cutter plating, IE, 1 13, p.96
GM stock disposal plan, 6 2, p.50
Ilmenite property, B, 3 10, p.110
Licenses for high-purity silicon, 6 9, p.142
Metal equipment cleaning, check costs, 6 16, p.51
One-shot cleaning, TO, 6 16, p.97

Durant Tool Co.:
Stock straightener, IE, 6 9, p.126

Dynavia Engineering Corp.:
Organized, 1 13, p.84

E

Eagle-Picher Co.:
May reopen Okla. smelter, 6 30, p.41

Eastman Kodak Co.:
Faster x-ray film, TO, 4 7, p.101

Eclipse Fuel Engineering Co.:
Hydrogen furnace, IE, 2 10, p.103

Edgcomb Steel of New England Inc.:
Buys warehouse, 3 24, p.80

Edlund Machinery Co.:
Coolant system, IE, 6 9, p.124
Power table, IE, 4 7, p.130
Vertical gun drill, IE, 5 19, p.174

Ekstrom, Carlson Co.:
Installs Allis-Chalmers motor, 1 20, p.30
Motor-machine tool, 1 27, p.42

Electra Motors Inc.:
Gear motor, IE, 3 10, p.156

Electric Auto-Lite Co.:
Battery starterproof, 6 30, p.64
Closing Evendale plant, 2 10, p.57

Electric Machinery Mfg. Co.:
Trackwelding motor bearing brackets before boring, 2 10, p.66

Electric Products Co.:
All-ac servo (Varepack), 4 7, p.108

Electric Steel Foundry Co.:
Forms Industrial Div., B, 6 16, p.75

Ellicott Fabricators Inc.:
Egmont, B, 3 17, p.75

Elliott Mfg. Co.:
Barrel finishing Vibrashot machine, TO, 2 3, p.107

Ellis Engineering Co., R. E.:
Automatic machine, IE, 2 24, p.100

Elwell-Parker Co.:
Fork truck, box frame, IE, 5 12, p.116

Elox Corp. of Michigan:
Electrical discharge machines, 4 21, p.165

Emhart Mfg. Co.:
Gun drilling, Hartford Empire buys, 4 7, p.116
V & O press design, 4 21, p.170

Empire-Reeves Steel Corp.:
Gas atomizes open-hearth fuel, Mansfield plant, 4 14, p.144

Emulsol Chemical Corp.:
Degreaser, IE, 4 28, p.130

Endress Inc., Wm. E.:
Hydraulic elevator installation, IE, 6 9, p.132

Engelberg Huller Co.:
Conveyor belt grinder, IE, 4 7, p.125

Engine Life Products Corp.:
Filters, IE, 4 14, p.168

Erie Foundry Co.:
Forging press designed for user wants, 3 17, p.105
Mechanical forging press, IE, 2 3, p.143
Press trims forgings, IE, 6 9, p.128

Erisz Mfg. Co.:
Magna-Rolls, IE, 2 10, p.102
Nonelectric magnetic pulley, IE, 6 2, p.92

Eximrude Motors:
Automatic-System trims handling costs, 3 31, p.98

Exact Weight Scale Co.:
Automatic weigher, IE, 4 14, p.162
Checkweigher, IE, 5 26, p.130
Weight classifier, IE, 6 9, p.123

Ex-Cell-O Corp.:
Boring machine taper, IE, 2 24, p.99
Bryant Chucking merged, 2 3, p.38

F

Fairbanks, Morse & Co.:
Motor Capacitor, IE, 6 9, p.132

Falls Steel Tube & Mfg. Co.:
Sprinkler system, 2 24, p.86

Fansteel Metallurgical Corp.:
Tantalum-columbium plant, B, 3 24, p.94

Code: B *Briefs;* TO *Technical Outlook;* IE *Industrial Equipment*

Farmall Works: See International Harvester

Fawick Corp.:
New product picked for profit, 5-19, p.97

Federal-Bryant Machinery Co.:
Merger, 2-3, p.97

Federal Machine & Welder Co.:
Buys Berkeley-Davis line, B, 3-17, p.71
Press, IE, 3-3, p.124

Federal Press Co.:
Dual-feed press, IE, 3-3, p.134

Feedal Inc.:
Bar feeder, IE, 6-30, p.106

Ferranti Electric Ltd.:
Merging, 6-23, p.81

Ferro Machine & Tool Co.:
Inspection unit, IE, 6-23, p.116

Fisher Ltd., George:
Automates foundry, 6-16, p.98

Fitzgibbons Boiler Co.:
Forms plate products unit, 6-30, p.77

Foote Bros. Gear & Machine Corp.:
Reducer gears, IE, 5-19, p.177
Speed reducers, IE, 5-12, p.110

Foote Mineral Co.:
Technical center, B, 5-12, p.73

Ford Motor Co.:
1958 models, features, 5-12, p.60
1958 models, 5-19, p.100
Cruise-O-Matic transmission price up, 1-14, p.100
Edsel tooling to produce, 1-7, p.24
Edsel roof panel, pic., 6-2, p.50
Expenditures forecast for tooling, design, 1-14, p.80
Extrusion slashes wheel assembly costs, 5-5, p.88
Ford div. price cuts, 1-14, p.100
German-built Taunus, 1-7, p.26
Glass use, 6-30, p.64
Hardware Div.: Automatic assembly moves ahead, 3-3, p.120
Heavy trucks added, 1-20, p.50
La Q-liXie pic., 1-20, p.50
Lincoln piping for paint distribution system, 5-19, p.156
Management fight shapes (Breech, Nance, McNamara), 3-17, p.57
Management, and manufacturing group changes, 4-28, p.70
Marketing shifts, M-E-L div. headed by Nance, 1-27, p.51
Mercury economy model (Medalist), price, 1-20, p.50
Plastics plant, 2-10, p.58
Small car outlook, 3-10, p.73
Stockholders meet, report on small car, expansion plans, 6-2, p.50
Thunderbird sales, outlook, 3-31, p.62; 5-12, p.60; 6-23, p.61
Thunderbird, 4-seater, 1-13, p.50
Thunderbird soft top, 5-5, p.66
Unemployment and payroll "57, 2-3, p.78

Formsprag Co.:
Telescoping boom extends lift range, 1-7, p.106

Fostoria Pressed Steel Corp.:
Oven sections, IE, 1-20, p.86

Freeport Sulphur Co.:
Congressional hearing, "Monopolistic," 6-2, p.42
Plans offshore plant, Gulf of Mexico, 6-30, p.77

Friden Inc.:
New name, B, 1-13, p.66

Furnace Plastics Inc.:
Concrete bond, TO, 3-10, p.121

Fusion Engineering Co.:
Automatic soldering for assemblies, 6-2, p.68

Futurmill Inc.:
Tool-Gard, IE, 1-28, p.129

Fyr-Fyter Co.:
Buys Globe Automatic, 3-24, p.100
Buys Kruger, B, 6-23, p.78

G

Gabriel Co.:
Buys Bohannan, 2-24, p.66
Selectric: Shock absorber-driver dial controls, 1-20, p.79

Garrett Corp.:
Airlesearch tumbles small parts, 3-31, p.90

Garrison Machine Works Inc.:
Gear inspection unit, IE, 4-7, p.130

Gasflux Co.:
Brazing salvages cracked stampings: E. H. Conway, 3-3, p.110

Gasway Corp.:
Roller coating, painting before forming, 6-16, p.121

Gear-O-Mation: See Michigan Tool

Granaa Industries Co.:
Watertight extruded film, IE, 5-12, p.119

Gebhart Machine Tools Ltd.:
Grinding attachment inspection machine, IE, 4-28, p.127

General American Transportation Corp.:
Purifier-Kilgo Jet-Setter, IE, 3-31, p.107

General Blower Co.:
Heat fans, IE, 1-6, p.108

General Dynamics Corp.:
Convair:
Astronautics Div. moves, 3-17, p.81
Borescope inspects inaccessible areas, 5-19, p.163
Navy missile award, 3-31, p.75
Paint tray of expanded metal, 1-27, p.92
Titanium study (Air Force), 1-20, p.62
Wind tunnel, 4-7, p.89
Atomic sub for Navy, 1-14, p.113
Beam predicts nuclear power, 3-3, p.69

General Electric Co.:
Automates job shop: Small AC Motor & Generator Dept., 1-27, p.38
Builds steel casting foundry, 3-17, p.48
Builds testing reactor, B, 4-21, p.88
Computer plant, Afiz., 4-7, p.98
Decentralization: Getting ready for the '60s, 1-27, p.37
Electrical steels, how to choose and improve them: B. A. Rogers, 6-9, p.116
Heating technique minimizes distortion: R. E. Wright and C. Schulenberg, 5-26, p.102
How we buy machine tools: W. W. Kuyper, turbine-generator dept., 4-28, p.116
How we saved $75,000 in three months' production efficiency: H. J. Brice, DC Motor & Generator Dept., 3-10, p.144
Hump-type furnace has purity brick lining, IE, 6-2, p.91
Key to disposable cutters: Harold York, 2-17, p.136
Magnets cut conveyor joint line, 1-7, p.120
Motor size reduced, IE, 5-12, p.172
Pay boost more than 2%-inflationary, report, 6-16, p.42
Production jobs, small lot, Raider report (specialty control dept.), 3-24, p.125
Russian tour, Hollomon and Hibbard, 2-24, p.29
Silicon resistors for Haller press, 3-3, p.63
Static switching catches on: R. E. Manko, 1-27, p.80
Vacuum-melted alloys, new, 3-24, p.130; 6-16, p.108

General Fireproofing Co.:
Anodized colored office furniture, 3-31, p.42
Buys Otis Steel Products, B, 5-5, p.80

General Mfg. Co.:
Flexible-power presses, IE, 6-23, p.116

General Motors Corp.:
1959 model features, 5-12, p.59
AC Spark Plug: Static control on assembly machine, 4-7, p.123
Aluminum engines, report, 6-9, p.70
Average hourly earnings in '57, 2-24, p.30
Buys replaces old equipment, beats cost crisis, 3-3, p.64
Chevrolet anodizes grilles, 1-13, p.49
Chevrolet builds 38 millionth car, 4-14, p.100
Cost-of-living pay boost, 5-5, p.48
Delco-Remy ac generator, autos, 4-14, p.100
Detroit Diesel adds engine plant, 2-17, p.75
Frigidaire: Press for precise assembly, 5-5, p.108
Labor demands, GM Council, 2-3, p.68
Labor negotiations (see: Labor-UAW)
Profit sharing, UAW plan, 1-20, p.29
Small car plans, 3-10, p.73
Small car (Australia): Chevrolet-Holden, 2-3, p.78
Technical Center: Free piston engine test on computer, 1-20, p.65
Transaxle previewed, 5-19, p.100

General Sales & Engineering Co.:
Low cost trucks, IE, 5-5, p.114

General Waterworks Corp.:
Buys interest in Cochrane, B, 5-5, p.79

Gerlinger Carrier Co.:
Carrier, heavy-duty, IE, 3-24, p.134

Giant Grip Mfg. Co.:
Buys Prevost Forged Products, B, 5-12, p.81

Giddings & Lewis Machine Tool Co.:
Buys Prescott land and buildings, 5-26, p.85

Gillette Safety Razor Co.:
Cost crisis: Automatic assembly trims costs, 3-24, p.104

Gleason Works:
Quenching press, IE, 5-26, p.129

Goddard & Goddard Co.:
Blade mill cutters, IE, 4-7, p.126

Gorske Industrial Equipment:
Sludge-vac, TO 2-24, p.100

Graham Engineering Research Inc.:
Buys Milwaukee File, B, 3-31, p.76

Granite City Steel Co.:
Expands, 5-5, p.79

Graver Water Conditioning Co.:
Union Tank subsidiary, 2-3, p.94

Gray Equipment Mfg. Co.:
Assembly machine, IE, 3-17, p.124

Grayson Equipment Co.:
Buys Straus-Duparquet, B, 6-16, p.79

Great Lakes Carbon Corp.:
Safety program, employee committees, 6-23, p.53

Green Fire Brick Co., N. P.:
Buys Stevens, B, 6-16, p.79
New plant, B, 2-17, p.75

Greenlee Bros. & Co.:
Boring machine, IE, 1-27, p.97
Precision borer, IE, 5-5, p.117

Gregory Industries Inc.:
Buys Polis, B, 4-28, p.88

Grieve-Hendry Co.:
Furnace for solution heat treating, IE, 3-17, p.122

Griswold Mfg. Co., F. T.:
Rapid indexing, IE, 4-21, p.178

Gross Co. Inc., Carl J.:
Formed, B, 5-19, p.113

Grumman Aircraft Engineering Corp.:
Merchant ship contract, 4-21, p.52

Gulf States Tube Corp.:
Adds mill, 1-27, p.42

Gulton Industries:
Quality measurements, IE, 3-10, p.154
Transformer field, 2-10, p.73
Ultrasonic soldering iron, IE, 3-24, p.140

Guthery Machine Tool Corp.:
Spindle chucker, IE, 4-14, p.163

H

H & B American Machine Co.:
Indianapolis plant, B, 1-27, p.66
Negotiates for General Trading, 6-23, p.78

H & H Machine Co. Inc.:
Redrawn seamless tubing, IE, 6-16, p.124

Hagan Chemicals & Controls Inc.:
Buys Kybernetes Corp., B, 6-2, p.63

Haller Inc.:
Powder metal press Germany built, 3-3, p.63

Hamant Tool Co. Inc.:
Machine prints wood grain pattern, IE, 4-28, p.128

Hamden Deep Hole Drilling Co.:
Gun drill, 6-9, p.105

Hamilton Tool Co.:
Portelvator, IE, 3-17, p.120

Hammond Machinery Builders Inc.:
Dust collector, IE, 1-6, p.160

Hancock Industries:
Forms new company, 4-21, p.67

Hancock Mfg. Co.:
Telecontrol: System keeps tab on production, 1-14, p.160

Handy & Harman:
Buys Posen & Kline Tube, B, 5-12, p.81
X-ray films, silver recovered, 4-14, p.142

Hanna Co., M. A.:
Buys Brazilian ore fields, 3-3, p.56

Hannifin Co.:
Bench press, IE, 3-10, p.156

Hansford Mfg. Corp.:
Davis Keyseater div., 3-17, p.75
Small die handler, IE, 6-30, p.113

Hanson-Van Winkle-Munning Co.:
Buys Alert Supply, B, 2-10, p.74
Plate stripper, IE, 3-17, p.124
Reorganizes engineering div., 3-31, p.79

Harbison-Walker Refractories Co.:
Missile launching refractory, TO, 3-17, p.93

Harcraft Brass:
Conveyor moves odd-shaped parts, 3-31, p.96

Harris & Reed Mfg. Co.:
Chicago firms buy, 2-10, p.73

Harris Calorific Co.:
Welding torch, IE, 1-27, p.94

Harris-Intertype Co.:
New offices, 5-5, p.80

Harrison Machine Co.:
Shell core blower, IE, 2-10, p.108

Harrop Ceramic Service Co.:
Refractory furnace fires continuously, IE, 6-9, p.126

Harsco Corp.:
Ainsworth-Precision Div., 3-10, p.113

Hartford Empire: See Emhart Mfg.

Harvey Aluminum Corp.:
Extrudes bus conductor, B, 3-10, p.107

Harvey Mfg. Corp.:
Surface grinder, IE, 3-3, p.126

Harvill Machine Co.:
Grinder for throwaways, IE, 5-19, p.174

Hauck Mfg. Co.:
Furnace burner down-fire, IE, 6-2, p.92

Havir Mfg. Co.:
Acquires press line, 6-30, p.77

Hawkridge Bros. Co.:
Buys plate line, B, 3-17, p.71

Haynes Stellite Co.:
Buys heating furnaces, B, 3-10, p.107
Slip casting for powder parts, 5-19, p.162

Heald Machine Co.:
Rotary surface grinding automatic, 6 30, p.84
Surface grinder, IE, 2 17, p.160

Hedges Mfg. Co., M. M.:
Rebuilds plant, B, 5 12, p.76

HEF Inc.:
Solid fuel field, 3 3, p.84

Hein Werner Corp.:
Buys Fox River, B, 3 17, p.78
Buys Tri Bending, B, 6 16, p.80

Heli-Coil Corp.:
Expands, B, 6 30, p.76
Thread inserts for lighting fixture, 6 23, p.107

Heller & Associates, Robert:
Plant layout advice, 5 26, p.100
Pricing for profit, 6 16, p.92

Hettrecht Machine Co.:
Static controls on snorkeling assembly machine, 4 7, p.123

Heppenstall Co.:
Licensing agreement (Germany), B, 3 17, p.71
Sheet filters, IE, 1 27, p.91
Tongs handle sheet, IE, 3 3, p.135

Hercules Motors Corp.:
Buys engine line, B, 6 16, p.75

Hercules Powder Co.:
Utah plant for solid propellents for rockets-missiles, 4 14, p.116

Hercules Power Equipment Co.:
Water tube boilers, IE, 3 3, p.128

Herr Equipment Co.:
Stacker magnetic rubber, IE, 4 21, p.174

Hevi-Duty Electric Co.:
Stacker hearth furnace automatic, IE, 1 6, p.135

Hill Acme Co.:
Research building, pilot runs for new tools, 2 10, p.92
Research unit, 2 3, p.93

Hi-Shear Rivet Tool Co.:
Power drive fasteners, IE, 4 21, p.178

Hobart Bros. Co.:
AC arc welder, IE, 2 17, p.162
Lightweight unit speeds CO2 welding, 6 16, p.118

Hoffman Engineering Co.:
Mechanized conveyorized finishing boosts profits, 6 23, p.92

Hoffman Machinery Corp., U. S.:
Filter by vacuum, IE, 6 23, p.116

Hoglund Engineering & Mfg. Co.:
Wheel dresser, IE, 3 17, p.122; 5 5, p.112

Hohman Plating & Mfg. Co.:
Suri-Kote lube, IE, 5 19, p.188

Homabite Corp.:
Epoxy-based sealer, IE, 5 5, p.120

Hooker Chemical Corp.:
Durex Plastics decentralized, B, 6 16, p.75

Hoover Ball & Bearing Co.:
Buys Ahlberg Bearing, B, 3 31, p.76

Horizons Inc.:
Power possibilities, direct generation of electricity, 2 17, p.68

Hotpoint Co.:
Appliance factory, 2 10, p.48
Buying plan builds confidence 4 14, p.79

Houdaille Industries:
Auto bumpers, stripped parts ready for replating, 2 3, p.112
Drill setting locked, IE, 4 21, p.169

Hough Co., Frank G.:
Payloader, IE, 5 5, p.119

Houghton Co., E. F.:
Plant and lab added, B, 4 14, p.116

Howe & Fant Inc.:
Turret-six spindles, IE, 4 21, p.173

Howe Scale Co.:
Weightograph, IE, 4 14, p.174

Howell Electric Motors Co.:
Merger pending, 4 21, p.85

Hughes Aircraft Co.:
Automated building block tools, 3 17, p.38
Monogram agreement signed, B, 4 21, p.85
Tapes control transfer line, 3 31, p.84

Hustler Corp.:
Mast hoists, stacks, IE, 5 26, p.130

Hydraulic Press Mfg. Co.:
Compression molding press, IE, 3 10, p.151

Hyster Co.:
Buys Martin Machine, B, 4 14, p.122
Lift truck, IE, 2 17, p.160

I

Illinois Gear & Machine Co.:
Adds plant, B, 4 7, p.76

Illinois Tool Works:
Buys Pamco Solenoids, B, 6 2, p.63

Industrial Brownhoist Corp.:
Sold, 2 24, p.63

Industrial Combustion Inc.:
Formed, officers, 1 27, p.66

Industrial Filtration Co.:
Metal mesh belt continuous oil filter, IE, 2 17, p.161

Industrial Scale & Equipment Co.:
Nacosite furnace, portable, IE, 3 10, p.150

Industrial Testing Reactors Inc.:
Testing reactor planned, B, 5 5, p.79

Intilco Inc.:
Conduit cleaner, IE, 2 3, p.134

Inland Steel Co.:
Building has movable interior walls, 3 10, p.89
Chicago Loop skyscraper, 2 10, p.73
Moves headquarters, 1 27, p.66
Orders reheating furnaces, B, 2 24, p.63
Pilot plant, smelting iron ore, 2 17, p.68

Intercontinental Dynamics Corp.:
Control on edge slitter reduces trim waste, 6 23, p.101

International Business Machines Corp.:
Automatic fastener equipment (Jet-Setter screw feeder), 4 21, p.149
Hourly workers put on salary, 4 7, p.64
Punch card control, J & L mill, 1 27, p.39
Purchasing dir. bents cost crisis, works with suppliers, 3 17, p.47

International Harvester Co.:
Farmall Wks: One furnace does three jobs, 2 24, p.74
Rotoblast barrel automatic: Shot-blasting cuts costs, 4 14, p.142

International Nickel Co.:
Acid handling safe level device prevents overflow, 4 28, p.115
Expands Huntington works, B, 5 26, p.88
Molten salt pickling plant, W. Va., 5 5, p.80
Pilot plant plans, 6 30, p.77
Welding wire, "Inco-Weld A" 4 14, p.91

International Nickel Co. of Canada:
Expansions, 1 7, p.56

International Silver Co.:
Buys Evelet Specialty, 3 24, p.100

International Steel Co.:
Buys Lindsay Structure, B, 2 24, p.63

Intertype Co.:
Roller storage racks and truck racks for handling, 5 26, p.117

Ipsen Industries Inc.:
Heat treat unit, IE, 3 3, p.123
Moves ceramic div., 6 2, p.30

Island Creek Coal Co.:
Coal carbonization lab, 4 7, p.95

J

Jarrell-Ash Co.:
Spectrometer, IE, 2 24, p.160

Jarvis Corp.:
Opens plants, B, 1 27, p.68

Jeffrey Die & Engineering Co.:
Transfer machine, IE, 3 31, p.160

Jersey Mfg. Co.:
Hose lining machine, IE, 4 21, p.166

Jessup Engineering & Development Co.:
Proxi-Trim transducer, IE, 3 17, p.120

Jeta Metal Fabricators Inc.:
Cargo containers, 3 31, p.97
Forms Power Equipment div., B, 5 5, p.79

Jiffy Metal Products Co.:
Buys Attoller, 2 24, p.99

Jig Bushing Co.:
Improved bushing, heats cost crisis, 4 7, p.66

Johnson & Bassett Inc.:
Trammel indexes, IE, 1 27, p.97

Johnson Machine & Press Corp.:
Form press, IE, 2 3, p.140

Jones & Laughlin Steel Corp.:
Cuts gear shaping costs, increases cutting speed, mail, Aliquippa Works, 1 27, p.39
Butterfly valves on oxygen for blowing pipe, 1 27, p.52
Cuts for strip handling, TO, 3 31, p.70
Completing 550-million project, 2 10, p.73
Copper coated strip, marketed, 4 7, p.9
Extrudes rivets for steel, 4 14, p.107
Gage control for strip mill, Al Cohio Wks, 4 7, p.110
Layouts, 2 10, p.73
Leases iron property, Quebec, 3 3, p.18
Marking ID plate coated vs bare coated steel, 4 14, p.114
Merges stainless strip steel divs, 6 30, p.44
Pipe mill, Aliquippa, completes expansion program, 6 30, p.80
Stainless for heat treating, Customers call the temper, 2 24, p.75
Stainless steel wire mill, Detroit, 4 14, p.114

Joy Mfg. Co.:
Builds at Buffalo, 2 17, p.76

K

Kaighin & Hughes Inc.:
End-welded studs for cooling coil refinery, 2 24, p.80

Kaiser Aluminum & Chemical Corp.:
Activates extrusion press, 1 20, p.62
Billet scalper cuts both sides in preparation for rolling aluminum products, 4 14, p.152
Cutting blades large for billet scalper, TO, 3 17, p.93
Hot rolling line new, Ravenswood, 6 9, p.58
Kaiser upgrades aluminum welding, 3 24, p.128
Laminated foil plant, 1 13, p.66
Reclaiming rolling fluids at solvent-coolant plant, 5 19, p.154
X-rays foil thickness, TO, 3 10, p.121

Kaiser Aluminum & Chemicals Sales Inc.:
Small alum. pigs, IE, 1 20, p.88
Deoxidizing pig, IE, 4 14, p.164

Kaiser Steel Corp.:
Buys stock of Allison Steel, 6 9, p.84
Expansion slowdown, 2 3, p.58
Expansions, West Coast, 5 5, p.51
Relocates facilities, 6 30, p.77
Theft of small tools, detective tech., 5 5, p.61

Kaydon Engineering Corp.:
Vertical turner and borer, Fraunthal Div., IE, 2 17, p.151

Kearney & Trecker Co.:
Railroad car wheels, machine-handled vertically by transfer machine, 6 16, p.105
Tape control, IE, 3 3, p.123

Kelley Co. Inc.:
Dock board, IE, 1 27, p.97

Kelley & Co., O. G.:
Cask for transporting radioactive fuel elements, 3 3, p.117

Kelsey-Hayes Co.:
Fuel Metals moves plant, 2 10, p.48

Kenco Mfg. Co.:
Press, quiet gears, IE, 5 19, p.182
Punch press, IE, 1 27, p.96

Kennecott Copper Corp.:
Bacteria extract metals, TO, 3 3, p.84
Buys property, 3 3, p.84
Buys Utah smelter, B, 5 12, p.78
Refinery, Maryland, B, 4 14, p.116

Keuffel & Esser Co.:
Plastic film for photographing tabulations, 5 19, p.150

Kidd Drawn Steel Co.:
Merger, 2 17, p.111

Kidde & Co. Inc., Walter:
CO2 fire protection for machines, IE, 6 16, p.121

King Tester Corp.:
Portable Brinell tester, IE, 6 2, p.146

Kinney Mfg.: See New York Air Brake

Kirk & Blum Mfg. Co.:
Industrial ovens, IE, 6 30, p.106

Koehring Co.:
British affiliates merge, 3 17, p.78
Buys Ko-Mo Tools, B, 6 9, p.84

Koehring Inc., Waldes:
Vulcanizer shut down, B, 5 26, p.93

Kolene Corp.:
Conveyorized paint stripper, IE, 5 19, p.180
Paint stripper, IE, 3 10, p.152

Kollmorgen Optical Corp.:
Boroscopes, IE, 1 20, p.87

Koppers Co. Inc.:
Barium wire electrodes aid electrostatic precipitators, 3 10, p.118
Direct reduction, Strategic City process, 4 7, p.56, advertisement, 4 21, p.164
"Price light" seven ways (Fred Foys, 6 16, p.94

Kozma Co., J. A.:
Furnace rebuilt quickly, IE, 3 17, p.112

Kropp Forge Co.:
121 Years of labor peace, 1 27, p.45

Krylon Inc.:
Coating for plating racks, IE, 1 6, p.169

L

Laboratory Equipment Corp.:
Oxygen analysis 5-min., TO, 5 26, p.99

La Dean Mfg. Co.:
Turnover Cradle coil handler, IE, 6 2, p.94

Lake Shore Industries Inc.:
New machine whips contouring job, 5 12, p.90

Lamb Co., F. Jos.:
Burnishing machine, IE, 1 20, p.86
Gear tooth grinder, IE, 3 17, p.122

Laminated Shim Co.:
Shimming from laminated aluminum, TO, 6 23, p.89

Lamp Co., C. N.:
Dual headlights, 1 13, p.50

Lamson & Sessions Co.:
This bolt holds better; W. G. Waltermire, 3 31, p.82
Bolt with hooked knurls, TO, 2 24, p.69
Cost cutting: Feeder slashes burnishing costs 95%, 2 17, p.140

Landis Machine Co.:
Buys English firm, 6 16, p.51
Grinders for piston pins, automatic loading, 2 10, p.92

Langley Mfg. Co.:
Hydraulic lift truck, small, 5 5, p.119

Lapointe Machine Tool Co.:
Indexing machines, IE, 4 28, p.127

Latrobe Steel Co.:
Ejection coupings, TO, 1 20, p.65

Lawrence Mfg. Corp.:
Ultrasonic cleaner, IE, 3 3, p.130

LeBlond Machine Tool Co., R. K.:
Lathe, IE, 6 9, p.123

Lectrotch Co.:
Electrolytic marker, IE, 6 2, p.92

Lectro-Heat Products Corp.:
Generators, produce steam, IE, 6 23, p.116

Lee Wilson Engineering Co. Inc.:
Control coil unwinding, cost cutting, 1 28, p.101
opening coils for unwinding nylon string, 3 19, p.144

Leeds & Northrup Co.:
Research center, B, 6 23, p.75

Lehigh Fan & Blower:
Inlet control, IE, 2 10, p.106

LeMaire Machine Tool Co.:
New name, B, 1 16, p.66

Lepel Electronics Laboratories Inc.:
Unit, induction generator, IE, 2 10, p.96

Le Roi: See Westinghouse Air Brake

LeTourneau Inc., R. G.:
Develops earthmoving equipment, 1 20, p.28

Lewis-Shepard Products Inc.:
Multi-Master truck capacity, IE, 4 14, p.161
Roller cradle ease handling, 3 24, p.117

Lincoln Electric Co.:
Adds to welding process, Innershield, 5 12, p.102
Submerged arc welding, MU, 3 4 7, p.110

Lincoln Floor Machinery Co.:
Buys Wilshire Power Sweeper, 4 14, p.120

Lindberg Engineering Co.:
Atmosphere furnace, IE, 2 10, p.153
Tube furnace, IE, 2 3, p.

Linde Co.:
Acetylene generator, 1 27, p.96
Argon purity raised, IE, 5 5, p.116
OXygen plant, Duquesne Works, 5 19, p.80
OXygen plant, Pittsburgh Steel, 3 31, p.75
OXygen plant to serve four U. S. Steel plants on Monongahela River, 5 26, p.80

Linde Air Products Co.:
Furnace "quickfrozen," stopped at midcycle, 6 16, p.106

Lindsay Chemical Co.:
Merges, B, 3 17, p.78

Line-O-Coat Co.:
Fume washer, IE, 1 27, p.91

Link-Belt Co.:
Vibration screen, IE, 5 12, p.107

Link-Belt Speeder Corp.:
Out, plant, B, 5 12, p.73

Lipe-Rollaway Corp.:
Bar feed, IE, 3 17, p.122

Littell Machine Co., F. J.:
Sheet hitter, IE, 3 10, p.156

Little, Arthur D., Inc.:
Metallic fuels, Gibbons reports, 4 14, p.95

Litton Industries:
Research facility, B, 5 26, p.88

Lockheed Aircraft Co.:
Cost Crisis: Numerical control cuts cost, 6 2, p.66
IAM submit demands, 1 20, p.29
Machining speeds for tomorrow, rifle drives machined projectile past cutting tool, 4 14, p.139
Profiling machine, tape control, 3 10, p.141
To mfg. nuclear reactors, B, 5 12, p.76

Lodge & Shipley Co.:
Buys Climax Products, 3 3, p.88

Logan Engineering Co.:
Automated turret lathe, IE, 1 21, p.172

Loma Machine Mfg. Co., Inc.:
Combination rolling mill, IE, 3 24, p.134
Saw cuts aluminum billets, IE, 5 12, p.107

Lone Star Steel Co.:
Stretch-reduced casing and tubing mill, 2 3, p.65

Lord Chemical Corp.:
Vibrator speeds finishing, 6 9, p.116

Lovejoy Flexible Coupling Co.:
Buys Hi-Lo Mfg., B, 5 12, p.81
Gear reducer, IE, 1 6, p.162

Lukens Steel Co.:
Alloy for below zero use, 6 23, p.56
Expands facilities, B, 5 12, p.74
Mill rolls clad bistellov, 3 31, p.100
T-1 steel used for test, 3 31, p.91
Welding electrodes marketing, 6 30, p.59

Mc

McDowell Co., Inc.:
McDowells visit Europe, Report our engineering knowhow wanted, 3 3, p.57

McGill Mfg. Co., Inc.:
Europe's fringe benefits, report, 3 10, p.80

McKay Machine Co.:
Drill tape-controlled, IE, 6 23, p.118

McKinsey & Co.:
Executive pay, profit role, survey, 3 31, p.50
Recommends ending O&M, creating new agency, 4 28, p.62

M

M A B Metal Products Co.:
Buys Young hangar unit, B, 1 21, p.88

Mac-Dermid Inc.:
Absorbs Canadian sub., B, 6 9, p.81

Machine Tool Electric Corp.:
Magnet, die-mounted, IE, 3 10, p.156

Madison Industries Inc.:
Coolant unit, IE, 3 10, p.156

Magi-Power Co.:
Sheet separator, IE, 3 26, p.136

Magline Inc.:
Floor trucks, IE, 1 20, p.88
Traction solved, grating trucks, IE, 5 12, p.108

Magnaflux Corp.:
Honeycomb inspection, IE, 3 24, p.136
Inspection kit, fluorescent, IE, 1 6, p.168
Tester for ferrous parts, IE, 4 21, p.170

Magnetrol Inc.:
Acid handling, level control, 4 28, p.115

Magnus Chemical Co. Inc.:
Metals cleaner, IE, 5 19, p.168

Maguire Co., Walter:
Floor patch, IE, 2 10, p.106

Makepeace Co., D. E.:
Rolling reduces waste, 3 10, p.126

Mallory & Co. Inc., P. R.:
New metal powders, TO, 1 13, p.69

Mallory-Sharon Metals Corp.:
Buys stock of Johnston & Funk, 5 12, p.81
Electron beam melted alloys, 3/24, p.108
Organized, formerly Mallory-Sharon Titanium, 2 3, p.93; 1 13, p.66
Pin down titanium pickling variables: Evers and Komp, 6 23, p.94
Processes zirconium tubes with Bridgeport Brass, 3 24, p.89
National Distillers, timetable for growth, 3 31, p.55
Zirconium tubing order, B, 3 31, p.78

Man-Au-Cycle Corp. of America:
Threading lathe, IE, 5 12, p.107

Manco Mfg. Co.:
Billet shear, IE, 1 6, p.162

Manheim Mfg. & Belting Co.:
Drive belts, IE, 3 3, p.227
Variable speed belt, IE, 3 31, p.104

Mannesmann International Ltd.:
Moves offices to New York, B, 5 5, p.80

Mannesmann Meer Inc.:
Moves quarters, B, 6 30, p.77

Manning, Maxwell & Moore Inc.:
Air hoists, Shaw Box Crane Div, IE, 6 9, p.132
Load scales, IE, 1 6, p.165

Manpower Inc.:
Employment surveys, 1 20, p.30

Manpro Corp.:
Degreaser is portable, IE, 6 23, p.120

Mansaver Industries Inc.:
Coil grab, IE, 5 26, p.156

Martin Co.:
Grid layout cuts hole punching time, 2 3, p.150
Hot forming titanium, 3 3, p.109
Mill handles big plane parts, 4 7, p.129

Massey-Harris-Ferguson Ltd.:
Buys Detroit gear plant of Long Mfg., 1 20, p.63

Matheson Co. Inc.:
Gas mixtures for Mig welding, IE, 3 31, p.107

Maxwell Industries Inc.:
Buys Kemer Cutting Tool, 2 24, p.63

May-Fran Engineering Inc.:
Portable conveyor, IE, 2 17, p.152

Mead Specialties Co.:
Pneumatic feed turretable, IE, 2 24, p.100
Tube flaring machine, IE, 3 24, p.131

Medelton Co. Inc.:
Coil cradle, IE, 1 6, p.166

Metachemical Processes Ltd.:
Micrograin nickel, flexible for plastic sheet, 4 28, p.115

Metal Finish Inc.:
Barrel finishing - Vibrasible for small parts, 3 24, p.109

Metal Forming Corp.:
Merged with Vanadium, B, 5 26, p.90

Metal Specialty Co.:
Buys Nestler, 3 17, p.71

Metals & Controls Corp.:
Nuclear subsidiary, 1 27, p.68

Metcut Research Associates:
ASTE report: Barriers to faster cutting, 5 5, p.100

Metron Instrument Co.:
Small couplings, IE, 1 20, p.88

Metropolitan Stamping Co.:
Buys Willys pressed metals div., 4 14, p.100

Mettler Machine Tool Inc.:
Wire straightener, IE, 2 17, p.154

Michigan Steel Tube Products Co.:
Merges, 1 20, p.63

Michigan Tool Co.:
Feeder counts parts, IE, 4 7, p.126
Gear finishing machine, throw-away tooling, IE, 5 19, p.165
Gear loader, IE, 2 3, p.138
Gear-O-Mation part handler, IE, 1 6, p.158
Gear-O-Mation washer cycles fast, 3 3, p.100
Marvex drive eliminates shock load factors, IE, 5 26, p.125
Tool rolls splines in tubing, 6 9, p.94
Washer, IE, 5 19, p.168

Micro Deburring Co.:
Buys Illinois Deburring, B, 4 28, p.88

Micrometrical Mfg. Co.:
Waxometer, IE, 3 3, p.112

Microtech Co.:
Expands, B, 3 17, p.81

Midcontinent Tube Service Inc.:
Mideo Valves, affiliate, B, 5 5, p.79

Midland-Ross Corp.:
Buys Haring Engine, 3 24, p.100
J. O. Ross office building, B, 4 21, p.86
Strip descaled automatically, 3 10, p.136

Midwest Aluminum Supply Corp.:
Organized, B, 6 9, p.84

Midwest Sintered Products Corp.:
Metal powder fasteners, IE, 1 27, p.71

Midwestern Instruments Inc.:
Buys Modern Art Metal, 3 10, p.113

Miehle-Goss-Dexter Inc.:
Buys Mercury Ring, 1 27, p.69; 2 10, p.74

Milford Rivet & Machine Co.:
Riveting machine, IE, 1 27, p.93

Mill All:
Pantograph control machine, IE, 3 10, p.156

Miller Corp., Berry:
Lube prevents metal contacts, IE, 4 7, p.128

Miller Electric Mfg. Co.:
Welder, built-in timer, IE, 6 23, p.118

Mine Safety Appliance Co.:
Gas analyzer, IE, 2 3, p.134

Minneapolis-Honeywell Regulator Co.:
Missile help, B, 2 24, p.63

Minneapolis-Moline Co.:
UA waste-heat engine deters waste like, 4 7, p.62

Minnesota Mining & Mfg. Co.:
Adhesive high strength, IE, 4 14, p.178
Honeycomb adhesives, IE, 2 3, p.134
Plastic die made with treated metal powder and an epoxy liquid, 3 17, p.95
Vibrasible, aids barrel finishing-tumbling, 3 24, p.109

Minnesota Rubber Co.:
Buys Park Tool, 2 3, p.97

Minster Machine Co.:
Blanking press, IE, 1 27, p.93

Mirror Insulation Co., Inc.:
Mirror insulation, 3 3, p.132

Missouri Boiler & Tank Co.:
Name change, B, 5 12, p.73

Modern Mfg. Co. Inc.:
Portable nibbler, IE, 6 30, p.113

Monarch Machine Tool Co.:
Lathe attachments, IE, 3 24, p.131

Monroe Auto Equipment Co.:
Shock absorber induction hardening line, 3 10, p.141

Monsanto Chemical Co.:
Fire-resistant fluid, TO, 3/24, p.103

Morey Machine Co.:
Numerically controlled machines, 3 24, p.125

Morley Machinery Corp.:
Buys Davis Keyseater, 2 24, p.66; 3 17, p.75

Morton Mfg. Co.:
Horizontal boring mill, IE, 1 6, p.155

Code: B *Briefs;* TO—*Technical Outlook;* IE—*Industrial Equipment*

Mosler Safe Co.:
Buys Dominion Safe, B, 5-26, p.88

Motch & Merryweather Machinery Co.:
Machine tool show scheduled, 5-19, p.151; reported, 6-16, p.110
Variable machine cycle, IE, 5-26, p.142

Motorola Inc.:
Printed circuit repair kit, TO, 6-23, p.89

Mueller Brass Co.:
Buys American Sinteel, 3-24, p.100

Multifastener Corp.:
Licenses Pierce Nut, 6-2, p.83

Murray-Way Corp.:
Polishing-buffing machine, IE, 5-12, p.112

N

Nankervis Co., George L.:
Sold, B, 2-10, p.74

Narda Ultrasonics Corp.:
Buys Alcar Instruments, B, 5-26, p.90

National Automatic Tool Co., Inc.:
Center column machine, IE, 2-17, p.154
Motor frame drill, IE, 2-17, p.152
Multiple spindle drill, IE, 1-6, p.169
Multiple spindle machine, IE, 6-9, p.124

National Broach & Machine Co.:
Automatic gear loader, IE, 6-23, p.115
Gear honing machine, IE, 2-24, p.102
Gear service offered, B, 5-5, p.79
Rotary gear shaver, IE, 4-14, p.176

National Carbon Co.:
Heat exchanger, IE, 2-3, p.138

National Cash Register Co.:
Equipment spending, 2-24, p.36

National Cylinder Gas Co.:
Chemetron new name, 4-7, p.56, 4-21, p.85
Electronic controls flame cutting, 5-26, p.111
NCG realigns divisions, 3-3, p.84
Plans plant, B, 5-26, p.85
Portable welding unit, IE, 3-24, p.131

National Distillers & Chemical Corp.:
From whisky to metals (16-in. with Mallory), 3-31, p.55
Leases titanium plant, B, 6-2, p.62

National Electric Products Corp.:
Acquiring Frequency Standards, 3-17, p.81

National Machinery Co.:
Machine cold forges bolts, 4-28, p.112
Replacement services, 2-24, p.30

National Malleable & Steel Castings Co.:
Buys Grand Rapids Plating, 1-27, p.69
Closes foundry, 6-30, p.77

National-Standard Co.:
How to pick stainless springs, 6-16, p.120

National Steel Corp.:
Buys Enamelstrip, B, 1-13, p.66

National Supply Co.:
Merged with Armco, 4-28, p.83
Tracer lathe replaces four machines, cost crisis, 4-28, p.98

National Wire Products Corp.:
Expands, B, 3-17, p.78

NaVan Products Inc.:
Sabrex liquid preservative, IE, 3-24, p.110

Neal Co. Inc., R. C.:
Zipp screw feeder, IE, 6-30, p.106

Nelson Iron Works, N. P.:
Tractor-shovel, IE, 2-17, p.152

Nestler Corp.:
Reorganized, 3-17, p.71

Neville Ferro Alloy Co.:
Formed by Pittsburgh Coke, 2-10, p.117

New Britain-Gridley Machine:
Coining lathe, IE, 6-30, p.103, 3-31, p.108

Newfoundland & Labrador Corp.:
Purchased, 4-28, p.88

Newport News Shipbuilding & Drydock Co.:
Consumable inserts weld for atomic reactor pressure vessel, 5-19, p.159

New York Air Brake Co.:
Kinney vacuum furnace, IE, 1-20, p.89

Noble Co.:
Plate handler, IE, 6-16, p.123
Sheet handler, IE, 2-24, p.99

Noble & Westbrook Mfg. Co.:
Bench press, IE, 1-6, p.169
Machine marks tags, IE, 6-23, p.121
Marker for small pieces, IE, 6-9, p.126
Marking press, IE, 5-19, p.177
Roll marker, IE, 2-3, p.136

Nooter Corp.:
Builds office building, B, 2-10, p.74

Norden-Ketay Corp.:
Merged with Solar Aircraft, 2-10, p.74

Norgren Co., C. A.:
Spray-lube, IE, 3-3, p.128

North American Aviation Inc.:
Photographing templates, plastic film, 5-19, p.159
Plating helps titanium, 5-5, p.102
Tank for fuel reservoir in rocket engine, 4-14, p.113
X-15 rocket plane has stainless skin, 3-31, p.34

North American Cyanamid Ltd.:
Coke ovens added, 2-3, p.65

Norwalk Tank Co.:
Submerged arc cuts weld cost, 1-13, p.76

Nottingham Steel & Aluminum Co.:
Sold, B, 6-9, p.84

Nuclear Corp. of America:
Dysprosium metal, B, 5-12, p.76, and p.86
Rare earth prices cut, 5-26, p.157

O

Oakite Products Inc.:
New divisions, B, 1-27, p.68

Offenhauser Co.:
Hot point tired leads improves sprays, 2-17, p.139

Ohio Electric Mfg. Co.:
Merger likely, 1-21, p.85

Ohio Ferro-Alloys Corp.:
Silicon reduction plant, expansions, 2-17, p.75

Ohio Fuel Gas Co.:
Gas atomizes open-hearth fuel, V. B. Thompson, 4-14, p.141

Ohio Gear Co.:
Speed reducers, IE, 2-17, p.153

Ohio Nut & Bolt Co.:
Welded fastener cuts cost of machine, 4-21, p.143

Ohio Rubber Co.:
Automated molding process of rubber parts brings costs down, 6-30, p.59

Ohio Steel Foundry Co.:
Rolls induction hardened, 3-24, p.130

Olin Aluminum:
New York headquarters, B, 2-24, p.66

Olin Mathieson Chemical Corp.:
Ormet reduction plant, co-owned, 6-2, p.62

Oliver Corp.:
Closing plant, B, 3-31, p.75

Oliver Instrument Co.:
Ace grinding machine, IE, 6-30, p.113

Olsen Mfg. Co.:
Automatic lubricators, IE, 4-7, p.128

O'Neil-Irwin Mfg. Co.:
Press brake, IE, 2-17, p.158

Ormet Corp.:
Aluminum reduction plant, Ohio, 6-2, p.62

Osborn Mfg. Co.:
Core blower, IE, 4-14, p.161

Otis Elevator Co.:
Baker-Raulang now Baker Indus. Truck Div., 1-20, p.62

P

Pacific Industrial Mfg. Co.:
Rake angle adjustable on shear, IE, 5-19, p.185

Pacific Northwest Alloys Inc.:
Vibration detector, 5-5, p.89

Pacific Scientific Co.:
Gas-fired furnace, IE, 3-24, p.136

Pacific Welding Co.:
Magnet spotwelder joins fine wires and foils, 6-2, p.87

Page-Hersey Tubes Ltd.:
Opens 8th pipe mill, B, 5-5, p.79
Steel pipe mill, 3-3, p.81

Paidar Co.:
Cost crisis competition: Plating re-layout trims manhour waste, 5-19, p.124

Palmer-Bee Co.:
Overload protector, IE, 2-17, p.152

Pandjiris Weldment Co.:
Pipe rotator, IE, 3-31, p.104
Positioner, IE, 3-3, p.122

Pangborn Corp.:
Blasting machine, IE, 2-3, p.133

Pantex Mfg. Corp.:
Jet cleaner, IE, 1-27, p.96

Parish Pressed Steel: See Dana Corp.

Park Tool Co.:
Sold, B, 2-3, p.97

Parker-Hannifin Corp.:
Unites divisions to form Parker Seal, 3-17, p.71

Partlow Corp.:
Temp. control, IE, 1-27, p.96

Payson Mfg. Co.:
Chicago farms buy, B, 2-10, p.73

Peninsular Metal Products Corp.:
Buys Nankervis, B, 2-10, p.74

Pennsylvania Engineering Corp.:
Mixing baffle, IE, 1-6, p.157

Pennsylvania Refining Co.:
Indoor rust prevention, IE, 5-19, p.174

Pereny Equipment Co.:
Tube furnace, IE, 4-28, p.128

Perfection Mfg. Corp.:
Sold, B, 5-26, p.90

Pesco Products: See Borg-Warner

Pettibone Mulliken Co.:
Fork lift truck, IE, 2-17, p.157, 4-14, p.168

Prandler Co.:
Glassed steel tips, TO, 4-7, p.101

Phelps Dodge Corp.:
Copper outlook, R. G. Page, 1-13, p.37

Phelps Mfg. Co.:
Threaded insert assembly, IE, 3-31, p.107

Phroll Mfg. Co.:
Buys Tubing Seal, B, 3-31, p.76

Philadelphia Bronze & Brass Corp.:
Blast furnace tuyere, 1-27, p.71

Philadelphia Gear Corp.:
Name change, B, 5-12, p.78

PIC Design Corp.:
Buys tool line, B, 3-3, p.81

Pines Engineering Co.:
Tube bending, 2-10, p.80
Tube bending press, 4-21, p.165

Pittsburgh Coke & Chemical Co.:
Broadens product line, produces ferromanganese and spiegeleisen, 2-10, p.117

Pittsburgh Consolidation Coal Co.:
Unitz pipeline soon to operate, 3-17, p.38

Pittsburgh Induction Heating Co. Inc.:
Organized, B, 2-24, p.63

Pittsburgh Plate Glass Co.:
New resins, IE, 3-31, p.107

Pittsburgh Steel Co.:
Bar mill project, 4-21, p.85
Operating loss, 4-14, p.80

Polymer Corp.:
Buys Holex, B, 5-5, p.80

Porter Company Inc., H. K.:
Buys Kidd Drawn Steel, 2-17, p.111
Vulcan name change, 4-21, p.85

Porter-Cable Machine Co.:
Powder parts and sell to tools, 6-23, p.111

Potter & Brumfield Inc.:
Leases plant, Ont., B, 6-9, p.84

Potter & Johnson Co.:
Automatic turret lathe, IE, 5-26, p.125
Tape control, IE, 2-17, p.154

Power-Curve Conveyor Co.:
Conveys around curves, IE, 6-30, p.106

Prairie Pipe Mfg. Co.:
Saskatchewan steel mill, 1-21, p.85

Pratt & Letchworth:
Revamps operations, B, 2-10, p.73

Pratt & Whitney Co. Inc.:
Profile machine tape controlled, pic., 6-16, p.53

Precise Products Corp.:
Quill holds tolerances, IE, 4-21, p.172

Precision Engineering & Gear Co.:
Sold, 1-7, p.96

Precision Welder & Flexopress Corp.:
Press feed, IE, 6-16, p.124

Prenco Mfg. Corp.:
Impregnation Units, IE, 3-17, p.121

Press Automation Systems:
Press unloader, IE, 4-21, p.168

Procunier Safety Chuck Co.:
Lead screw tapping attach, IE, 3-24, p.134

Production Feeder Corp.:
Elevating hopper, IE, 4-21, p.177

Production Machine Co.:
Cylinder grinding, IE, 4-21, p.160

Proler Steel Corp.:
Scrap upgraded by "proferizing", 5-19, p.98

Prosperity Co. Inc.:
Bolt holds presses, self-locking nuts, 3-17, p.98

Q

Quad Inc.:
Buys Quad Stove, B, 5-19, p.113

Queen Products Inc.:
Barrel finishing system, IE, 1-20, p.85

R

Radio Corp. of America:
Semiconductor div., new, 4-7, p.92

Ramo-Wooldridge Corp.:
Forms Thompson subsidiary, 1-13, p.66

Rampe Mfg. Co.:
Finishing unit, IE, 2-24, p.100

Code: B, Briefs; TO, Technical Outlook; IE, Industrial Equipment

Randall Co.:
Cost crisis savings, 2/3, p.105

Rapids-Standard Co. Inc.:
Magnetic conveyor, IE, 3/3, p.130
Power turntable, IE, 4/7, p.128

Raymond Corp.:
Pallet truck, IE, 2/3, p.144
Truck, power unit, IE, 5/19, p.174

Raytheon Mfg. Co.:
Buys Applied Electronics, 2/24, p.63
Midget spotwelder for fine wire and foil, 6/2, p.87
Research plans, B, 6/16, p.75

Reeve Electronics Inc.:
Induction generator, IE, 3/3, p.135

Reeves Pulley Co.:
Gear reducer, IE, 3/10, p.156

Reid Bros. Co.:
Electrolytic grinder, IE, 2/24, p.100

Reliance Electric & Engineering Co.:
Motors, high-thrust, IE, 5/19, p.171
Submersible ac motors, IE, 5/26, p.129

Rempe Co.:
Tank heater, IE, 5/19, p.168

Renite Co.:
Reciprocating sprayer, IE, 3/17, p.120

Republic Aviation Corp.:
Infrared controls heating of titanium, 2/3, p.130

Republic Steel Corp.:
Bar mill unveiled, S. Chicago plant, 6/30, p.53
Dedicates plant at Nitro, W. Va., B, 6/9, p.84
Direct reduction, R-N process, 3/17, p.102
Expands sintering, 2/24, p.40
Expansion funds, 5/12, p.40
Order processing system, 4/7, p.67
Pressed Steel Div., steel pallets, 6/2, p.77
Union Drawn Steel: How steel firm checks machinability, 6/23, p.108
Wage rise comments, White, 5/19, p.79

Research Associates:
Deburring with ultrasound, 4/7, p.102

Research Corp.:
Licensing aid, 2/24, p.47

Reuland Electric Co.:
Gear motor, IE, 4/7, p.132

Revere Copper & Brass Corp.:
Ormet reduction plant, co-owned, 6/2, p.62

Reynolds Metals Co.:
Adds cartons to line, B, 5/12, p.73
Adds foil mills, B, 2/24, p.40
Aluminum smelted with atomic power from ore deposits, outlook, 6/2, p.30
Buys hot mill for Sheffield, Ala., 1/27, p.68
Duplex pipe produced, 4/14, p.113
Extrusion press for aircraft shapes, Loewy-designed for Navy, 3/3, p.81
Sales headquarters, B, 6/16, p.80

Rice Pump & Machine Co.:
Die filer, IE, 1/6, p.457

Richards Co., J. A.:
Bending pressure on pump, IE, 6/2, p.94
Hydraulic Bender, IE, 3/3, p.124

Richards Tool & Mold Co.:
Master-molds, 3/17, p.122

Rigidized Metals Corp.:
Colored stainless, licensee, 5/12, p.88

Rio Tinto-Dow Ltd.:
Formed, B, 1/27, p.68

Robbins & Myers Inc.:
Fan shaft lengthened, IE, 4/7, p.126

Robertshaw-Fulton Controls Co.:
Transfers operations, B, 5/12, p.73

Rockwell Mfg. Co.:
Gas absorption air conditioning for plant, 3/3, p.94

Rockwell Spring & Axle Co.:
Negotiates for Aero Design, B, 5/12, p.81

Rockwell-Standard Corp.:
Name change, B, 6/9, p.84

Roe Canada Ltd., A. V.:
Buys firms, B, 5/26, p.90

Roebling's Sons Corp., John A.:
Wire rope design, IE, 5/19, p.180

Roll Formed Products Co.:
Buys FlexAngle, B, 6/9, p.84

Rolled Steel Corp.:
Foreign sales dept., 3/3, p.81

Roller-Smith Corp.:
Shutdown, 4/7, p.92

Roll-Weld Pipe & Tube Co.:
New name, 1/13, p.66

Robbs-Connersville Blower Co.:
Special lathe whips spiral cutting, 1/27, p.77

Roto-Finish Co.:
Roto-Matic machine, IE, 6/23, p.118

Royal McBee Corp.:
Moving presses, mobile crane used, 4/14, p.142

Russell Co., E. C.:
Buys Vun Russ, B, 4/14, p.120

Russell, Burdsall & Ward Bolt & Nut Co.:
Tapping screw tips, 2/24, p.87

Rotor Tool Co.:
Air impact wrenches, IE, 4/7, p.132

Rowe Machinery & Mfg. Co.:
Coil cradle, IE, 4/21, p.173

Russell Co., E. C.:
Headquarters moved, B, 6/16, p.80

Rusticide Products Co.:
Metal etcher, IE, 5/19, p.174

Ruthman Machinery Co.:
Discharge pump, IE, 3/10, p.154

Ryan Aeronautical Co.:
Fine grind celectrolytic cuts tool costs, 6/2, p.72
Titanium use for pods and pylons, 4/14, p.80

S

S & S Machinery Co.:
Lathes, IE, 6/23, p.115

St. John d'el Rey Mining Co.:
Acquired by Hanna, 3/3, p.56

St. Joseph Lead Co.:
Iron ore div., Ozarks, 2/10, p.38

Safety Appliances Co.:
Explosiharm, IE, 4/28, p.128

Sage Equipment Co.:
Turntable, IE, 3/17, p.122

Sahlin Engineering Co. Inc.:
Press unloader, IE, 2/10, p.106

Salem-Brosius Inc.:
Builds reheating furnaces for Inland, 2/24, p.63
Enters atomics, B, 5/19, p.113

Samuel & Co. Inc., Frank:
Acquires Nathan Trotter Co., 2/24, p.63

Schmidt Inc., Geo. T.:
Stamps nameplates, IE, 3/31, p.108

Sciaky Bros. Inc.:
Rocker arm spotwelder, IE, 4/7, p.132

Scullin Steel Co.:
Merger proposed, 3/10, p.113
Merged, 5/5, p.80

Selby, Battersby & Co.:
Komul coating, IE, 6/2, p.92

Sel-Rex Corp.:
Portable electroplater, IE, 4/7, p.130

Serrick Corp.:
Ala. plant, B, 5/12, p.76

Service Machine Co.:
35-ton power press brakes, TO, 3/17, p.119
Punch press, IE, 4/7, p.130
Punch press, IE, 4/14, p.164

Servo Corp. of America:
Infrared pyrometer controls heating of titanium, 2/3, p.130

Sharon Steel Corp.:
Atom smasher for Midwest Assn., 5/19, p.113
Brainard purchasing unit realigned, 2/24, p.63
Brainard tubular steel shoring dept., 2/3, p.93
Oxygen steelmaking, direct reduction experiments, 4/7, p.56

Shaw-Box Crane:
See Manning, Maxwell

Sheffield Corp.:
Polk speaks for standardized inch, 2/24, p.29
Printout system, IE, 5/26, p.125
Servovalve Seminar for representatives, 4/21, p.149

Sheldon Machine Inc.:
Turret lathe, IE, 4/7, p.132

Shieldalloy Corp.:
Ferrocolumbium for atoms, IE, 1/20, p.88

Sicburg Industries Inc.:
Machine tests pieces, IE, 5/26, p.132

Sierra Drawn Steel Corp.:
Expands, B, 2/17, p.75

Sight Feed Generator Co.:
Automatic welder, Rex-arc, IE, 3/10, p.159

Simonds Worden White Co.:
Grinding wheels, IE, 1/6, p.469

Simpson Optical Mfg. Co.:
Optical vernier, IE, 3/24, p.140

Singer Mfg. Co.:
Forms div., B, 5/12, p.78

Singer Steel Co.:
Revere Aluminum distributorship, B, 3/10, p.107

Size Control Co.:
Forms special gage dept., 3/24, p.89

Slack-Horner Brass Mfg. Co.:
Incentive plan pays off, 6/2, p.40

Sly Mfg. Co., W. W.:
Trucks speed strip coil drying, 5/19, p.116

Smith Corp., A. O.:
1500-ampere welder, TO, 2/24, p.69
Auto frame production lines, 4/21, p.71
Forms western div., 3/10, p.110
Motors designed for adverse operating conditions, IE, 5/19, p.165
Replace complete motors in machines with essentials—rotors and stators, 5/12, p.96

Smith & Sons Inc., G. W.:
Protect-O-Metal, IE, 3/31, p.104

Smith Mfg. Co., R. E.:
Metal bent 180°, IE, 5/19, p.171

Snow-Nabstedt Gear Corp.:
Gun drill, easy for deep holes, 6/9, p.105

Snyder Tool & Engineering Co.:
Bank credit advised for sound financing for small firms, 6/2, p.41
Machine slashes wheel turning time, 5/19, p.138
Machining line, axle housings, IE, 1/27, p.97
Milling machine, IE, 3/3, p.126

Solar Aircraft Co.:
Merges Norden-Ketay, B, 2/10, p.74
Processing 310 minimizes carbides: Hiram Brown, 1/27, p.72

Solar Steel Corp.:
Combines units, 1/20, p.62
Evolution in warehouse, Friedman reports, 2/17, p.83
Integrates service, B, 5/12, p.73

Somers Brass Co.:
Sendzimir mill, 1/20, p.62

Southwestern Engineering Co.:
Markets Krupp-Renn reduction process, F-28, p.109

Special Engineering Service Inc.:
Pneumatic press feed, IE, 6/30, p.103

Spee-Flo Co.:
Airless paint spray, IE, 3/17, p.120

Speedi-Burn Products Co.:
Steel plate cutter, IE, 3/10, p.152

Spencer Turbine Co.:
Sump-Vac moves coolants, IE, 5/5, p.120

Sperry Products Inc.:
Portable reflectoscope, IE, 5/19, p.177

Spitfire Tool & Machine Co.:
Lapping machine, IE, 5/5, p.112

Square D Co.:
Manual starters, IE, 1/27, p.96
Welder controllers, IE, 6/30, p.111

Stackbin Corp.:
Bin-rack truck, IE, 3/3, p.136

Stackpole Carbon Co.:
Merges Pure Carbon, 3/3, p.88

Stanat Mfg. Co.:
Rolling mill compacts metal powders into strip, 3/31, p.96

Standard-Modern Tool Co.:
Welding machine halves welding time, steel wrapper for stator cores, 3/10, p.142

Standard Pressed Steel Co.:
Aircraft nut, IE, 1/6, p.466
Expands aircraft-missile, B, 1/27, p.68
Purchasing agent beats cost crisis, simplifies fabrications, 3/17, p.47
Setomatic set screw driver, IE, 4/21, p.170

Standard Steel Works:
See Baldwin-Lima-Hamilton

Standard Tool & Mfg. Co.:
Indexing chassis, IE, 6/30, p.103

Standard Tube Co.:
Lightweight tubing for piping system, 5/19, p.156
Merges, 1/20, p.63; 2/11, p.111

Stanley Co.:
Plater unloads automatically (door hinges), 2/24, p.83

Stanley Works:
Roller coating drapery rods, painted before formed, 6/16, p.121

Stardrill-Keystone Co.:
Ruttenberg reports collective bargaining methods outdated, 2/17, p.78

Sta-Rite Products Inc.:
Buys Perfection Mfg., B, 5/26, p.90

Stauffer Chemical Co.:
Buys Anderson Chemical, B, 6/2, p.63
Halts production of titanium sponge, 4/21, p.52
Leases titanium plant to, 6/2, p.62

Stearns Magnetic Products:
Ceramic magnet pulley, IE, 4/14, p.180

Steel Co. of Canada Ltd.:
Blooming mill installed, expansions planned, 3/17, p.81
Spectrometer analysis of carbon, sulfur, phosphorus, 6/2, p.72

Steel Improvement & Forge Co.:
Extrusion slashes wheel assembly costs, 5/5, p.88
Staples strengthen corrugated boxes, 2/3, p.128

Stephens-Adamson Mfg. Co.:
Opens conveyor plant, B, 1/27, p.41
Ore feeder, IE, 1/6, p.464

Sterling Electric Motors Inc.:
Gear motor, IE, 5/26, p.129

Sterling National Industries Inc.:
Name change, B, 5/12, p.76

Code: B—*Briefs;* TO—*Technical Outlook;* IE—*Industrial Equipment*

Stevens Inc., Frederic B.:
Bulking compound, IE, 4/14, p.164
Plating barrel, IE, 2/10, p.106

Stewart-Warner Corp.:
Brazing tech., aluminum-stainless, TO, 5/12, p.85
Electronic balancer, IE, 2/3, p.140
Lubrication system, IE, 2/3, p.134
Make-or-buy?, Cost saving?, 3/31, p.58

Stokes Corp., F. J.:
Sintering furnaces, IE, 1/27, p.94

Stone & Webster Engineering Corp.:
Buys Associated Nucleonics, B, 3/31, p.76
Machining tech: eliminates backup rings in pipe welds, 3/31, p.100

Strategic Materials Corp.:
Strategic-Udy process for direct reduction, good features, 4/21, p.164

Stretch Wire Corp.:
Formed, B, 2/10, p.74

Stroman Furnace & Eng. Co.:
Holding furnace, IE, 3/17, p.122

Stromberg-Carlson:
Automation data (magnetic tapes) to control machine tools, 3/10, p.141

Strubnitz-Greene Spring Corp.:
Buys Flannery Mfg., B, 4/7, p.94

Studebaker-Packard Corp.:
Annual report, 3/31, p.62
Astral (pic), nuclear power, 3/31, p.62
Survival at South Bend?, 1/20, p.49

Studrive Inc.:
Stud used as tap, IE, 5/19, p.176

Sun Oil Co.:
Toledo refinery: End-welded studs on cooling coil, 2/24, p.80

Sunbeam Corp.:
Melt loss reduced-furnaces, IE, 5/19, p.180

Sundstrand Machine Tool Co.:
Buys Arter Grinding Machine, B, 4/14, p.122
Guided missile field, 3/3, p.87
Magnetic coolant separators, IE, 5/12, p.108
Milling machines, IE, 1/20, p.88

Superior Foundry Inc.:
Hot blast melting improves castings, 2/17, p.144

Superior Tube Co.:
Expands Wapakoneta, O., plant, 1/13, p.66
Pact with Western Pneumatic, 3/24, p.89
Rust preventive, TO, 6/9, p.87

Surface Combustion Corp.:
18 ways to move parts in a furnace: Donald Beggs, 6/23, p.90

Sutorbilt Corp.:
Blowers, IE, 5/19, p.171

Sutton Engineering Co.:
Extrusion press, IE, 3/10, p.152

Sutter Products Co.:
Shell core mold machine, IE, 3/3, p.135

Swift & Co.:
Acid fume depressant, IE, 4/14, p.180

Sylvania Electric Products Inc.:
Copper-plated aluminum, TO, 1/20, p.65
Wickstrum (v.p.) sees recession ending, 3/17, p.44

Symington-Gould Corp.:
Merges Wayne Pump, B, 2/10, p.74

Syntron Co.:
Feeders bowl type, IE, 4/7, p.130
Shaker conveyor, IE, 3/3, p.134

T

Taber Instrument Corp.:
Turnomat, lathe, IE, 6/16, p.123

Taft-Peirce Mfg. Co.:
Lapping machine, automatic, IE, 5/26, p.126

Tait Mfg. Co.:
Buys land, B, 4/21, p.67

Tal Bending Equipment Inc.:
Portable pump, 3/31, p.104

Taylor-Winfield Corp.:
Production welder, TO, 2/10, p.77

Techalloy Co. Inc.:
Superalloys offered, 4/28, p.83

Temco Machine Works Inc.:
Buys marine line, B, 3/17, p.75

Temescal Corp.:
Electron beam melting, 3/24, p.108
Electron bombardment furnace, 1/13, p.81

Tennant Co., G. H.:
Vacuumized sweeper, IE, 2/24, p.99

Textile Products:
Nonwoven wiper, IE, 4/21, p.177

Thomas & Betts Co.:
Buys Kent Mfg., B, 6/16, p.79

Thompson Products Inc.:
Cost Crisis: Valve div.-new lay-out ups output 10%, 5/26, p.100
Jet parts, cast cores and forged edges, 4/14, p.135
Kolcast division, B, 2/10, p.74
Million dollar turret lathe, 4/28, p.56
Seeks manufacturing rights for fuel injection, Georgia Tech, 3/31, p.62
Suggestion system: Listen to your employees, 4/21, p.68

Thompson-Ramo-Wooldridge Products Inc.:
Formed, 1/13, p.66

Thor Power Tool Co.:
Air-operated chain hoist, IE, 6/9, p.128
Impact wrench, IE, 1/6, p.160
Thor-Draulic nutsetter, IE, 4/21, p.166

Threadwell Tap & Die Co.:
Electronic comparator, IE, 1/20, p.86

Timken-Detroit Brake Div.:
Better material handling beats cost crisis, 3/3, p.64

Timken Roller Bearing Co.:
Bearing line needs few operators (new Columbus railroad bearing plant), 6/2, p.80
Five-year expansion program, 6/16, p.75
Hot tubing machining, spring chucking system: Cost cutter for automatics, 2/24, p.87
Modernizes, 3/31, p.49
Platform cuts ladle relining costs, 6/30, p.88

Tinius Olsen Testing Co.:
Balancing machines, IE, 1/20, p.88

Tipp Mfg. Co.:
Sold, B, 4/28, p.88

Titanium Fabricators Inc.:
Interest purchased by, 3/10, p.113

Titanium Metals Corp. of America:
King-sized titanium plate, TO, 2/3, p.107

Toledo Scale Co.:
Printweigh data, IE, 1/6, p.464

Titeflex Inc.:
AF contract, 4/7, p.89

Torit Mfg. Co.:
Mist collectors, IE, 6/30, p.106

Torrington Co.:
Control (Inchworm) to .50 millionths on centerless grinders, 3/24, p.110

Townsend Co.:
Sales program new, 1/20, p.45

Tri-State Engineering Co.:
Leasing plan, B, 5/19, p.113

True-Trace Sales Corp.:
Lathe tracer attach., IE, 6/30, p.111

Trundle Consultants Inc.:
Pricing for profit, marginal income approach, 6/16, p.90

Tube Methods Inc.:
Hastelloy X for sleds carrying tubes through furnace, 6/23, p.107

Tube Turns Plastics Inc.:
New type piping, B, 5/12, p.76

Tubular Rivet & Stud Co.:
Rivet setting machine, 4-headed, IE, 3/17, p.119

Turbo-Cast Inc.:
Buys plant, B, 4/21, p.85

Twin Coach Co.:
Sells marine engine line, 2/3, p.94

Ty Miles Inc.:
Bench-mounted broach, IE, 6/2, p.92

Tyson Bearing Co.:
Expands at Massillon, 6/16, p.75

U

Unexcelled Chemical Corp.:
Buys Jasco Alum., B, 2/17, p.111
Industrial park, B, 5/26, p.88

Union Asbestos & Rubber Co.:
Buys Sturdi-Bilt, B, 3/10, p.113

Union Chemical & Materials Corp.:
Merges Vulcan Materials, 1/13, p.66

Union Drawn Steel: See Republic Steel

Union Metal Mfg. Co. of Canada:
Expands, B, 5/12, p.76

Union Spring & Mfg. Co.:
Buys Biggs Boiler, 3/3, p.88

Union Tank Car Co.:
Buys Lang, B, 4/14, p.122
Graver Water subsidiary, 2/3, p.94

United Aircraft Corp.:
Synchrophasers, for engine propellers, Hamilton div., 4/14, p.113

United Engineering & Foundry Co.:
Expands, B, 6/23, p.75

United Laboratories Inc.:
Tapping fluid, IE, 1/20, p.86

U. S. Burke Machine Tool:
Hy-Flex milling machine, IE, 6/2, p.94

United States Chemical Milling Corp.:
Buys Hydro-Metal Spinning, 4/28, p.88
Buys Missile-Air, 3/24, p.100
Missile shell, chem-milled, TO, 1/13, p.69

U. S. Electric Mfg. Co.:
Electric trolley system, IE, 5/26, p.138

U. S. Industrial Chemicals Co.:
Pilot plant, Cincinnati, 2/17, p.75

U. S. Rubber Co.:
Plastic-coated steel, Marvibond process, 4/7, p.104

U. S. Steel Corp.:
AS&W:
Annealing units, spheroidizing bell-type, 6/2, p.62
Donora zinc plant dismantled, 4/14, p.80
Fencing aluminum coat, TO, 1/20, p.65
Open hearths closed, Mass., 4/14, p.95
Aluminum-coated steel sheets, outlook, 6/2, p.30
American Bridge:
Structurals aplenty now (A. J. Paddock says), 2/24, p.111
Business figures 1901-11 vs 1946-56, 4/21, p.51
Carney speaks on Russian steel mills (AIME meeting), 2/3, p.129
Columbia-Geneva:
Buys furnace controls, B, 3/17, p.71
West Coast expansions, 5/5, p.54
Consolidated engineering unit, 5/5, p.79
Consolidated closes fabricating plant at Taft, Calif., 6/30, p.76
Cyclone Fence headquarters move, 2/24, p.66
Depreciated steel, unrealistic taxes hurt economy, charge, 3/24, p.63
Duquesne Wks. adds mills, 1/27, p.39
Expansions: sintering plant, wire annealing furnaces, 6/23, p.75
Executive change (Cooper, Munford, etc.), pic., 2/17, p.79
Frozen furnace, experiment stopped in midcycle, 6/16, p.106
Irvin Wks.: Enameling steel in coils, 3/31, p.75
Lorain Wks., 7-day basis, 6/2, p.30
National Tube plans pipe mill, Lorain, 5/12, p.73
Nozzle design for steel pouring, 4/21, p.144
Parish package truck bodies, 4/21, p.88
Supply Div., Birmingham warehouse, 3/31, p.75
T-1 steels uses: Have what the users want, 2/17, p.126
T-1 steel, new guarantees, 5/19, p.163
Weight recording scale cars, Youngstown plant, 2/3, p.93

United States Steel Products:
Pails are stretched to shape, 5/5, p.90

U. S. Tool Co. Inc.:
Reel centered rapidly, IE, 5/26, p.126

Universal-Cyclops Steel Corp.:
Empire-Reeves acquisition approved, 2/17, p.111

United Tool Co.:
Contour-O-Matic, IE, 3/17, p.124

Universal Marion Corp.:
Scullin Steel merger proposed, 3/10, p.113
Scullin Steel merger, 5/5, p.80

Up-Right Scaffolds:
Tallescope, IE, 3/10, p.152

V

V & O Press: See Embart

Vac-U-Max:
Hopper feeder, IE, 3/17, p.124

Vanadium-Alloys Steel Co.:
Metal Forming merged, 5/26, p.90

Vanguard Engineering Co.:
Boom truck, 3/3, p.132

Van Norman Industries Inc.:
Buys Digit-Ometer, B, 1/27, p.69

Van Products Co.:
Press platens removable, IE, 6/9, p.132

Veeder-Root Inc.:
Electronic counters, IE, 4/7, p.130

Veet Industries:
Drill column scoreproof, IE, 6/2, p.92

Victor Adding Machine Co.:
Maintenance truck serviced from top, IE, 5/26, p.126

Victor Equipment Co.:
Acquires firms, 2/17, p.111

Virginia Metal Products:
Buys Metlwal plant, B, 3/31, p.76

Vlier Engineering Inc.:
Sold, B, 3/17, p.78

Volkert Stampings Inc.:
Vidmar Div., 3/3, p.87

Vulcan Materials Co.:
Concrete pipe div., 2/3, p.93
Merged, B, 1/13, p.66

W

Wadell Equipment Co.:
Boring cycle, IE, 4/21, p.168

Wagner Bros. Inc.:
Copper plating, IE, 3/3, p.136
Lining material, IE, 2/17, p.154
Plating rectifiers, IE, 3/17, p.120
Plating steel tips, 4/14, p.157
Rectifier design, IE, 5/26, p.142
Sells metal finishing assets, 6/23, p.78

Walker Co., O. S.:
Test for magnetic chucks, 4/14, p.150

Walker Mfg. Co.:
Buys Galt Metal, 1/13, p.66

Wall Colmonoy Corp.:
Brazing control, IE, 1/6, p.168
Portable welder, IE, 5/12, p.108

Wallace Barnes Co. Ltd.:
Montreal plant, B, 3/17, p.81

Wallace Supplies Mfg. Co.:
Swing cutoff machine, IE, 3/31, p.104

Wallingford Steel Co.:
Continuous strip with vacuum, TO, 5/26, p.99
Sendzimir mill, 3/3, p.81
Sendzimir mill—punch card, elongation gaging, 3/17, p.93

Walmet Corp.:
Ball mill for powdered metals, 2/24, p.63

Waltz Furnace Co.:
Furnace uses no rails, IE, 6/30, p.111

Wardwell Mfg. Co.:
Automatic miller, IE, 4/7, p.128

Warner & Swasey Co.:
Automatic bar machine, IE, 1/13, p.93
East Orange, N. J., office, B, 2/24, p.66
Million dollar turret lathe, depreciation story, 4/28, p.56

Warren Alloy:
Cooling unit, Frostrode Div., IE, 5/12, p.108

Washburn Wire Co.:
Only ingot producer (now) in New England, 4/14, p.95

Washington Machine & Tool Co.:
Purchasing agent beats cost crisis, 3/17, p.46

Waterbury-Farrel Foundry & Machine Co.:
Thread roller, IE, 4/14, p.171

Waterman-Waterbury Co.:
Electrostatic spray painting equipment: Saves $11,000 in 3 months, 2/17, p.141

Waukee Engineering Co. Inc.:
Compressors, IE, 1/20, p.87

Waukesha Motor Co.:
Buys Le Roi engine line, B, 4/14, p.120

WauMet Alloys Co.:
Enters vacuum melt field, B, 5/12, p.73

Wayne Pump Co.:
Merged, B, 2/10, p.74

Wean Engineering Co. Inc.:
Customer supplier relations: Engineers take GE course, 3/17, p.45

Wear-Ever Aluminum Inc.:
New name, 2/3, p.93

Wedgewood-Holly Corp.:
New name, B, 4/21, p.85

Wehr Steel Co.:
Buys Dings, 2/17, p.111

Weirton Steel Co.:
Continuous annealing (tin plate) on a grand scale, 1/20, p.74
Organized for electronics (installations), 3/24, p.112

Wellman Engineering Co.:
Submerged arc welding, semi-automatic (ML-3), 4/7, p.119

Western Electric Co.:
Point Breeze Works: Conductor wire plated continuously, 3/24, p.118

Western Gear Corp.:
Expands, B, 2/24, p.63
Gear motors, IE, 2/10, p.103

Western Pneumatic Tube Co.:
Pact signed with Superior Tube, 3/24, p.89

Westinghouse Air Brake Co.:
Le Roi compact air compressor, IE, 5/5, p.118
Le Roi sells engine business, 4/14, p.120

Westinghouse Electric Corp.:
Continuous annealing on a grand scale: C. E. Peck, 1/20, p.74
Job shop quality control: Frank Caplan Jr., atomic fuel dept., 1/13, p.75
Layoff cancelled, 4/21, p.77
Machine handles radioactive materials, 4/7, p.65
Motor F/A, 6/23, p.116
Plant addition, Beaver Falls, Pa., 4/21, p.85
Silicone rectifier, IE, 4/14, p.178
Speed drive Rectiflow, IE, 6/16, p.123
Transfer conveyor moves sheet from shear to press brake, TV-radio div., 4/14, p.150
Youngwood, Pa., plant, 4/7, p.95

Wheelabrator Corp.:
Cabinet descales rod, bar stock, IE, 6/30, p.113
Diversification pays, 2/24, p.39

Wheeling Corrugating Co.:
Expanded metal, 1/27, p.92
May build culvert plant, B, 3/24, p.89

Wheeling Steel Corp.:
Burner control, TO, 3/31, p.79
Modernization program, progress, 3/31, p.49

Wheland Co.:
Press compresses auto bodies, IE, 3/31, p.103

Whitney Chain Co.:
Marketing man brought into product planning, 3/24, p.72

Whitney Mfg. Co., W. A.:
Shear, versatile blade, IE, 5/19, p.171

Wickes Corp.:
Grinding wheel sizing, IE, 2/17, p.154

Willys Motors Corp.:
Aluminum engines, 6/30, p.63
Buys Jarecki pressed metals div., ships to Brazil, 4/14, p.100
Sells Pressed Metals Div., 4/14, p.100 and 4/28, p.86

Wilshire Power Sweeper Co.:
Electric sweeper, IE, 2/10, p.106
Sold, B, 4/14, p.120

Wilson Inc., K. R.:
Press has geared winch, IE, 4/28, p.129

Wilson Inc., Thomas C.:
Tube expander, IE, 5/10, p.168

Winsmith Inc.:
Speed reducers, IE, 2/17, p.162

Wintriss Inc.:
Overload detector, IE, 2/17, p.160

Wiretex Mfg. Co.:
Inconel heat treating baskets, 3/31, p.86

Wisconsin Drill Head Co.:
Tachometer in headstock, IE, 4/21, p.166

Wolverine Tube: See Calumet & Hecla

Worthington Corp.:
Bandsaw cuts bearing costs, 3/17, p.100
Positioner handles off shapes, IE, 4/14, p.180

Y

Yale & Towne Mfg. Co.:
7½-ton electric truck, IE, 3/24, p.140
Attachment dumps bins, IE, 6/23, p.120
Die handler, IE, 4/14, p.174
Lift truck, load release, IE, 4/28, p.129
Rider pallet truck, Transveyor, 3/17, p.120
Sells powdered metal products plant, 6/23, p.75
Truck, 30-ft lift, IE, 5/19, p.182

Young Iron Works:
Boxcar crane, IE, 6/16, p.124

Young Spring & Wire Corp. of Canada Ltd.:
Renamed, 3/3, p.84

Youngstown Sheet & Tube Co.:
Insulated power cables on strip mill save 50% on costs, 5/12, p.92
Merger: Court denies summary judgment, 1/20, p.37
Sintering plant, Ind. Harbor Wks., 4/7, p.98

Yuba Consolidated Industries Inc.:
Buys Magna Power Tool and Dalmotor, 4/14, p.120
Buys Weber Engineered Products, B, 6/16, p.79

Z

Zagar Inc.:
Four-station machine, IE, 3/31, p.103
Multiple-spindle tapper, IE, 5/5, p.112
Recession-curing prescription, 4/21, p.60

Zibell Co., Edward:
Vacuum lift, IE, 2/24, p.100

Zurn-Erie Corp.:
Buys Griswold, B, 4/28, p.91

Code: B—*Briefs;* TO—*Technical Outlook;* IE—*Industrial Equipment*

AUTHOR INDEX

B

Beggs, Donald. Surface Combustion Corp., 18 ways to move parts in a furnace, 6/23, p.90

Brice, H. J., General Electric Co., DC Motor & Generator Dept., How we saved $75,000 in three months, 3/10, p.144

Brown, Hiram. Sofar Aircraft Co., Processing 310 minimizes carbides, 1/27, p.72

C

Caplan Jr., Frank. Atomic Fuel Dept., Westinghouse Electric Corp., Job shop quality control, 1/13, p.75

Conway, E. H., Gasflux Co., Brazing salvages cracked stampings, 3/3, p.110

E

Evers, Dr. Dillon and **M. E. Komp.** Mallory-Sharon Metals Corp., Pin-down titanium pickling variables, 6/23, p.94

F

Fulton, J. C. and **R. H. Henke,** Allegheny Ludlum Steel Corp., Looking inside stainless ingots, 2/17, p.132

H

Henke, R. H. and **J. C. Fulton,** Allegheny Ludlum Steel Corp., Looking inside stainless ingots, 2/17, p.132

K

Kircher, Dr. C. E., Detrex Chemical Industries Inc., How to test solvent quality, 1/13, p.86

Komp, M. E. and **Dr. Dillon Evers,** Mallory-Sharon Metals Corp., Pin-down titanium pickling variables, 6/23, p.94

Kuyper, W. W., General Electric Co., How we buy machine tools, 4/28, p.116

L

Libsch, Robert N., American Bosch Arma Corp., Harder stainless practical, 6/30, p.85

M

Manko, R. E., General Electric Co., Static switching catches on, 1/27, p.80

P

Peck, C. E., Westinghouse Electric Corp., Continuous annealing on a grand scale, 1/20, p.74

R

Ruediger, B. A., General Electric Co., Electrical steels: How to choose and improve them, 6/9, p.116

S

Savage, Philip S., Donner-Hanna Coke Corp., We have plenty of good coking coal, 2/24, p.78

Schulenberg, C. and **R. E. Wright,** General Electric Co., Heating technique minimizes distortion, 5/26, p.102

Spencer, Lester F., Metallurgist, How to weld copper and its alloys, 1/27, p.87; 2/24, p.90; 3/17, p.110; 5/5, p.106; 5/26, p.122

Strasser, Federico, Springs fit tight spots, 3/10, p.148

T

Thompson, V. B., Ohio Fuel Gas Co., Columbia Gas Systems Inc., Gas atomizes open-hearth fuel, 4/14, p.144

W

Waltermire, W. G., Lamson & Sessions Co., This bolt holds better, 3/31, p.83

Wright, R. E. and **C. Schulenberg,** General Electric Co., Heating technique minimizes distortion, 5/26, p.102

Y

York, Harold, General Electric Co., Key to disposable cutters, 2/17, p.136

STEEL

EDITORIAL INDEX

for

VOLUME 143

July 1 to December 31, 1958

Subject Index 3
Company. Index . . . 14
Author Index 23

THE PENTON PUBLISHING COMPANY

Penton Building, Cleveland 13, Ohio

SUBJECT INDEX

A

Abrasives:
Abrasive cleaning saves (Tow motor) $40,000 a year, 7/7, p.66
Loose abrasives: Quick finishing at low cost, 12/15, p.150

Advanced Research Projects Agency:
Progress report, 9/22, p.44
Solid fuel program, 11/3, p.46

Air:
Airless plant aids space conquest, technicians protective clothing, 11/17, p.63

Air Conditioning:
Sales outlook, 9/1, p.28

Aircraft:
Helicopter transports industrial material, 10/27, p.47
Jet age airports lacking, 8/18, p.52
Jet for executives (Timken), 9/8, p.55
Panels peenformed, 7/7, p.69
Wing forming dies used at Convair (Kirksite), 7/28, p.68

Aircraft Industries Assn.:
Backlogs of firms decline, drop in production, 7/7, p.35
Missile spending, ground supports, 7/14, p.55; 10/6, p.40

Air Force:
Academy (Colo.) aluminum, 8/25, p.42
Mitre Corp. takes over defense system, 9/15, p.110

Airlines:
Revenue-sharing plan if struck, 11/10, p.69

Air Materiel Command:
Pushes producibility know-how, 11/24, p.112

Alaska:
Atom power for harbor excavation, forecast, 7/21, p.66
Bar rolling mill, 8/25, p.49
Economic survey due, 7/21, p.78
Investment opportunities, 7/7, p.30

Alloy Casting Institute:
Elects, B, 7/7, p.63

Alloys:
Beryllium, present-potential uses, 9/8, p.50
Cast copper data, 9/22, p.95
Copper-brass extrusion billets semicontinuous casting, 12/15, p.146
Impact extrusion takes on hard alloys, 9/1, p.64
Metal Selector: Special alloys boost metalworking's future, 10/20, p.158
Missile, space age (see Metals)
Welding alloy, Carpenter 404, 12/1, p.75
See Aluminum, Steels, Titanium

Aluminum:
'58 status, recovery begins, trends in usage, (charts), 9/8, p.48
Air Force Academy, aluminum, 8/25, p.42
Aluminized sheets, markets, 9/22, p.113
Aluminized sheet market (Republic), 12/1, p.108
Aluminum-bronze (Meier Wearite), 12/8, p.128
Aluminum entering new era (compete with lower cost materials), 11/10, p.190
Aluminum cans, industry gain, 7/28, p.36
Aluminum fasteners (see Fasteners)
Aluminum identification simplified, new temper series, 10/6, p.76
Aluminum ingot scalping machine, 8/25, p.98
Aluminum tooling plate markets, 8/18, p.47
Auto use:
'58-'59 average pounds per car (chart), 8/18, p.59
Alcoa lightweight fin radiator, 9/29, p.140
Ford-Reynolds predict use
License plates, Calif., 12/15, p.76
Bridges (see Construction)
Coatings:
Beefing up aluminum parts (metallic spray), 8/18, p.100
Coatings help metals beat heat, 7/28, p.66
New hard coat (electrochemical finish), 9/22, p.80
Future uses, TO, 8/4, p.95
Heat treating aluminum extrusions horizontally without warp, 9/29, p.104
Impact extrusion of aluminum takes on hard alloys, 9/1, p.64
Price increase, 8/11, p.120
Reynolds builds showplace, headquarters (pic), 9/1, p.30
Russia makes aluminum war, upsets world market, 7/21, p.77
Russian aluminum purchased by U. S. gov't., 8/11, p.34
Stainless inserts put threads in aluminum castings, 7/7, p.72
Truck use, 8/25, p.98
Wrought aluminum buyers, 12/22, p.37

Aluminum Association:
Aluminum identification new designations for stress-relieved tempers, 10/6, p.76
Fastener articles by Floyd Lewis (see Fasteners)

American Arbitration Assn.:
Labor cases administered, 8/4, p.66

American Die Casting Institute:
Elects, B, 9/29, p.83

American Foundrymen's Society:
Elects director, 9/15, p.136
Elects, B, 9/29, p.83

American Gas Assn.:
Forecast expansion, 9/15, p.98

American Institute of Mining, Metallurgical & Petroleum Engineers:
Elects, 9/22, p.66
Metal designated columbium, not niobium, 9/1, p.78

American Institute of Steel Construction Inc.:
Elects, B, 11/17, p.91
Structural bookings, 11/3, p.34

American Iron & Steel Institute:
Carson resigns, B, 10/13, p.86
Howell predicts '59, 12/22, p.30
Panel walls, survey, 8/11, p.33
Russian report, 9/8, p.40
Stainless new, D319, 11/10, p.134
Steelworkers' fringes 12/1, p.31
Steelworkers pay cost, employment records, 8/25, p.59
Steelworkers wages, weekly compared with average for all mfg., 10/6, p.42
Wage costs keep rising, 10/13, p.42

American Iron Ore Assn.:
Elects, B, 8/18, p.78

American Machine Tool Distributors' Assn.:
Elects president: Distributors' sales report, aid to industry, 10/27, p.41
Sales engineer staffs increased, 9/1, p.39

American Management Assn.:
Executive pay, 12/15, p.88
Meeting: Appraise Soviet trade strategies, 11/17, p.59
Middle management pay, 7/21, p.65
Research and development spending, survey, 9/8, p.39
Salesmen's earnings, 7/14, p.65

American Marketing Assn.:
Economic forecast, Cleveland meeting, 10/6, p.57

American Rocket Society:
Convention: Gen. Boushey says—adapt to space age, 9/22, p.39
Satellites as mail stations: RCA-Metzger reports, 12/8, p.79

American Society for Metals:
Alloys shrink rather than stretch during creep test, 11/24, p.117
Aluminum honeycomb dome headquarters ready, 12/29, p.39
Heat cuts magnetism: Y. L. Yao reports, 11/10, p.134
Literature searching by machine, 11/10, p.70
Metal show programs, 10/20, p.201
Schaefer secretary, B, 7/28, p.61

American Society for Testing Materials:
Approves basic oxygen process steel for, 9/22, p.95
Tests demand constant temperatures, 9/1, p.77

American Society of Mechanical Engineers:
President elects, B, 10/20, p.154

American Standards Assn.:
Elects, B, 12/8, p.104
Knurling revision, 10/20, p.271

American Welding Society:
Information Center, B, 11/17, p.91

American Zinc Institute Inc.:
Appointed research dir., 9/15, p.136

Anodizing:
Anodized electrical wire, 9/22, p.31

Appliances:
Electrical appliance sales, '57-'58 comparison, 7/14, p.62
Electrical appliance '57-59, factory shipments, 12/15, p.83
Electronic refrigeration coming, 8/4, p.50
GAMA sees sales gain, 9/15, p.115
Housewives appliance experiences (McCalls magazine), 10/20, p.131

Appraisal Counseling:
Motorola management development courses, 7/14, p.64

Apprentices:
Chicago area apprentice drive, 10/20, p.137
More apprentice programs needed, 7/7, p.46

Arbitration: See Labor

Area Development:
Industrial development and climate: Patton (Republic) addresses Canton Chamber of Commerce), 10/20, p.129
Missouri woos metalmen, 11/17, p.60
Pa. State woos industry, solves labor surplus, 8/18, p.48
West, Los Angeles (new industry), 9/8, p.51
West, southern Calif., 12/22, p.24
Westward trend, Commerce report, 12/15, p.87

Argonne National Laboratory:
Plutonium fuels tech. lab, 7/14, p.62

Armour Research Foundation:
See Illinois Institute of Technology

Army:
AMMO shows missiles, 7/7, p.41; 7/14, p.66

Associated Industries of Cleveland:
Auto wage settlements, yearly comparisons, 8/25, p.48
Conference addressed by Sen. Mundt, Stanley Brams, Jules Backman, 10/20, p.137
Handbook on labor relations for management, 8/25, p.49
Ohio workers win 7.09 cents, 11/10, p.69

Association of Iron & Steel Engineers:
1958 convention program, Cleveland, 9/15, p.180
Do-it-yourself exhibits, 9/29, p.56

Association of Missile & Rocket Industries:
Hugh Little: How missile contracts are landed, 8/11, p.34

Atomic Energy:
1975 powerplants, Turkevich (Princeton) predicts, 11/17, p.52
A-plane funds cut: Reds may beat us again, 11/24, p.60
A-plane future, Kelrn report, 12/1, p.44
Aircraft speedup sought, 10/13, p.42
Alarm check on radioactivity, TO, 12/15, p.127
Alaska harbor excavation, atom power forecast, 7/21, p.66
Atomic reactor pressure vessels, material, 12/22, p.72
Auto power-future, 9/29, p.85
Electric utilities spending, 8/18, p.40
GE pushes atom market, 11/10, p.81
Hanford Atomic Center uses old steel for radiation protection, 11/10, p.124
Peaceful applications, 11/3, p.34
Peaceful H-bomb, vast potential, 11/17, p.62
Plasma power for nuclear plants, TO, 12/15, p.127
Submarine program for '60s, 9/8, p.52
Submarine Nautilus conquers Polar, 8/18, p.51
Submarine Triton, other subs, 8/25, p.51

Atomic Energy Commission:
Argonne National Lab for uses of plutonium fuel, 7/14, p.62
Award to Ohio Injector, 11/10, p.80
Uranium production, 10/6, p.43

Automation:
'59 spending may hit $5 billion, how users plan expenditures, 10/13, p.49
Consider low-cost automation: Ben Eldridge and J. L. Fisher, 9/22, p.98
Eaton-Avel Div.: Automation between machines cost saving, 7/14, p.112
Erie Foundry: Automation triples forging output, 9/29, p.90
Renault opens way to world marts, 8/18, p.57
Station shutdown, three-section independence, TO, 12/1, p.69

Automotive:
4-door sedans—what you get for your money (chart), 11/10, p.89
'58-'57 model output (chart), 10/20, p.126
1958 options show changing demands (economy, easier handling), 9/8, p.59
1959: Automakers begin steel buying, 7/28, p.91
1959: Detroit set for rugged year, 8/18, p.59
1959 questions: Production, prices, 8/11, p.41
1959 sales forecast: Suppliers gage Detroit optimism, 10/20, p.125
1959 sales forecast (Prof. Brems, economist), 11/10, p.90
1960 car changes rumored, 11/24, p.71
Aluminum car on display, 12/1, p.32
Aluminum for '59, 8/18, p.59
Aluminum forecast (Ford and Reynolds), 11/3, p.54
Argonaut debut, pic., 11/3, p.53; 9/15, p.98
Atomic autos-future, 9/29, p.85
Auto accessories sales trend, 8/18, p.48
Beat-the-experts contest, 11/17, p.71; 11/10, p.90
Brake picture broadens as '59 brings 7/7, p.49
Buick: Changeovers are complicated, 7/14, p.75
Cadillac gas bag shocks, 10/27, p.50
Chevrolet press review, noise corrected, 12/1, p.51
Chrysler swivels into 1959, 9/15, p.117

Chrysler-Imperial, 10/6, p.54
Components (metal lb): What 100 000 cars mean to part production, 10/20, p.125
Copper uses, 10/27, p.85
DKW car price, 12/29, p.46
Designers' outlook on styling, 11/3, p.33
Dream car (pic) is contest prize (Ford), 12/29, p.45
Fisher Body operation, how suppliers get the business, 7/21, p.85
Ford soft-pedals styling, 10/13, p.63
Foreign car registrations, 7/21 p.96; 10/27, p.50
Fuel economy-'59, 8/25, p.41
GM debuts Pontiac Imperial, 10/6, p.53
GM instrument panels, 9/29, p.69
GM rotary valve power steering, 10/13, p.64
GM weighs decision on small car, 10/20, p.140
Ghost lines, defects in steel sheets, 12/22, p.47
Labor contracts (see Labor)
Nonferrous metals, outlook in autos, 9/1, p.41
Nylon auto parts, 11/24, p.72
Oldsmobile-'59, 9/29, p.70
Production, 1st half (cars), 7/14, p.75
Radar signals distance, traffic hazards, 7/14, p.76
Registrations - motor vehicles, 10/13, p.41
Renault automation, 8/18, p.57
Renault counts on style, Caravelle, 10/27, p.49
Simca, Chrysler small car, 8/11, p.42; 8/18, p.59
Simca "Aronde Elysee sedan," pic., 10/6, p.45
Small car role, 7/21, p.86
Small car, Canada, 9/8, p.39
Small car: Detroit still asks will they pay? 8/25, p.61
Small car, (AMC) Romney predicts, 9/22, p.51
Small car, Tokyo 7/7, p.50
Small car: Willys plans revival in Brazil, 7/28, p.47
Special machine buying, 8/18, p.45
Stocks drop 7/14, p.55
Studebaker-Packard's Lark and Silver Hawk, 10/20, p.139
Suppliers gage Detroit optimism, 10/20, p.125
Supplier strikes pending, 11/17, p.51
Suppliers predict sales gains 12/8, p.68
Tool and die shops fight for lives, 12/8, p.81
Torsion springs report, 8/4, p.69
Transmission, Presto-Matic unit 12/22, p.48
Volkswagens, price differential '57-'56 cars, 9/22, p.51
Volkswagen, Ford-GM push, 12/15, p.99
Volvo mechanizes its phosphating line, 8/25, p.100
Warranty costs: Automakers' headache, 9/29, p.69
What price obsolescence? 9/22 p.51

Automotive Manufacturers Assn.:
Elects, B, 7/28, p.61

B

Barrels: See Shipments

Bars:
Barmakers look to Detroit, industry report, 8/25, p.117

Battelle Memorial Institute:
Copper-base casting alloys data, 9/22, p.95
Fluidized bed process (refining solids), TO, 8/25, p.79
Information center, TO, 9/1, p.59
Tips on computer uses, TO, 9/22 p.79

Batteries:
Idea for battery charging of electric trucks, 9/8, p.103

Bauxite:
Hawaiian deposits, 9/15, p.98

Bearings, Bushings:
Antifriction bearings, industry report, 7/21, p.72

Beat-The-Experts: See Automotive

Beryllium:
Beryllium production soars (pics, present and potential uses), 9/8, p.50
Ductile beryllium research, 11/10 p.121

Billets:
Billet bar turned by magnet, 8/11 p.84
Copper-brass extrusion billets semicontinuous casting, 12/15 p.146
Glass bath heats forging billets 8/11, p.74

Blast Furnaces:
See Maintenance
See Production

Blasting: See Cleaning, Blasting

Bonding:
Hot bond, aircraft sections, TO 7/28, p.63
Porcelain-to-aluminum seal, TO 7/21, p.111
Pressure bonds, TO, 7/14, p.111
Tar bonds oxygen vessel bricks 7/7, p.74
Teflon bonded into metal, seals pores, 12/8, p.127
Wire brush bonded with elastomer plastic, 10/6, p.86

Books, Booklets:
AIC labor relations handbook 8/25, p.49
AISI booklet, steel weekly earnings, 10/6, p.42
County Business Patterns (Gov't), 8/18, p.90
Europe's economic integration: Chase Manhattan Bank, 8/18, p.55
Specs handbook for nonferrous ferrous, 11/10, p.124
Young workers under 18, Today and Tomorrow, 10/27, p.47

Brazil: See South America

Brazing:
Magnesium dip brazed accurately 8/4, p.101
Standard for shear lists, 9/1, p.66

Breakeven Point:
Breakeven point: Route to better decision making, 12/1, p.40
J&L break even point, 7/21, p.71

British Investment (Casters' Technical Assn.:
Formed, B, 8/4, p.86

British Iron & Steel Research Assn.:
Strip width meter for hot mill 10/20, p.182

Brushes, Brushing:
Design upgrades brushes: Twist tool wire brush bonded with elastomer (plastic), 10/6, p.86

Building Block:
Ohio Crankshaft: Induction heating equipment, 11/3, p.76
See Machine Tool Industry

Bureau of Mines:
Nickel, cobalt reclamation studies 10/20, p.269

Business & Defense Services Adm.:
Merger of ODM and FCDM may have side effects on agencies 7/14, p.68

Business (Economy):
1960s, are you ready? C.I.T. Lenihan report, 10/13, p.41
1965: Get ready for the new boom, 11/17, p.97
AMA forecast, 10/6, p.57
Auto execs set new economic trends, 9/29, p.55
Auto purchases triggered by disposable income rise (Prof. Brems address economic outlook conference), 11/10, p.90
Bethlehem's Homer forecast, 11/10, p.170
Chamber of Commerce forecast, 12/15, p.84
F. W. Dodge poll shows upturn, 11/10, p.93
How much boom in the recovery? Executive opinions at NICB meeting, 11/24, p.57
Distributors battle recession, 9/15, p.108
Inflation (see Editorials)
Jules Backman addresses Associated Industries, 10/20, p.137
Slichter (Harvard) reports hourly earnings, 7/28, p.28

Business (Markets):
Air conditioners, 9/1, p.28
Aircraft, declining profit, 7/7, p.35
Aluminum: Slump beaten, sales up, 9/8, p.48
Appliances, 8/4, p.73; 10/6, p.41; 12/15, p.83
Automation equipment and controls, 10/13, p.49
Bar products, 8/25, p.117
Bearings, 7/21, p.72
Business weathervanes, 9/1, p.22
Chemicals, 12/8, p.65
Coated steel aluminized sheets, 9/22, p.113
Closed circuits, 7/21, p.81
Components, barometer industry, 10/13, p.47
Construction dollar volume in '59, 11/3, p.42
Construction, '58, 8/25, p.65
Cutting tools, 10/13, p.53
Diecasting sales, 9/15, p.252
Dimakers, bellwether, 7/28, p.35
Extrusion—steel, 8/11, p.97
Fans, 7/14, p.71
Fasteners, 7/28, p.37; 8/25, p.118; 11/3, p.44
Foundry upturn, 10/27, p.111
Foundry, nonferrous sales, 11/10 p.167
Foundries step up equipment buying, 12/29, p.26
Gas appliances, 9/15, p.115
Gas line pipes, 12/15, p.85
Investment castings, 7/21, p.147
Machine tools, 7/28, p.27; 12/29 p.27
Malleable sales, production, 10/20, p.295
Metal furniture, 12/1, p.47
Motors, integral hp, 8/25, p.59
Motors, fractional hp, 8/18, p.59
Plastics, 12/1, p.41
Plating sales, 7/7, p.37
Play products (outboard motors, swimming pools, etc.), 7/14 p.63
Prefabs, 10/13, p.50
Refractory sales, 7/14, p.155
Replacement parts, 10/13, p.57
Scientific apparatus, 8/11, p.27
Screw machine products, bellwether industry, 7/28, p.27
Screw machine products ('1970), 12/29, p.29
Sheets, demand starts, 9/1, p.85
Silicon sheets, 9/29, p.115
Silver, 9/15, p.104
Special machines, 8/18, p.45
Stainless outlook, 11/17, p.153
Steel mill products, 10/27, p.35
Structural aluminum, 12/15, p.179
Synthetic rubber, 8/4, p.60
Tool and die barometer industry, 11/17, p.51
Tooling plate markets, 8/18, p.47
Transistors-semiconductors, 12/8 p.66
Trucktrailers, 9/22, p.40
Wire rods, bellwether product 11/3, p.45
Zirconium sponge, 9/29, p.60

C

Cabinets:
Furnace cabinets: Preassembly cuts painting and handling cost 8/25, p.80

Cables:
4-in. cable used at Arz. dam, TO, 7/7, p.65

Canada:
Aluminum underground powerplant, 9/29, p.57
Defense contracts cancelled, 10/20, p.128
Ingot production rises, 10/13, p.51
Steel negotiations watched by U. S., 11/3, p.33

Canadian Steel Warehouse Assn.:
Elects, B, 8/4, p.86

Capacity:
Metalworking will up capacity 2.6%, 12/15, p.81
Steelmaking, a look at the future, 9/15, p.149; editorial, 9/15, p.101
World steel, where gaining, (chart), 12/29, p.32

Capital Expenditures:
Automation spending, equipment and controls, 10/13, p.49
Capital equipment up, STEEL survey, 11/10, p.75
Highway program, expenditures, 8/25, p.41
Metalworking plant investments-upswing (SEC-Commerce), 9/15, p.103; 12/15, p.81
Research and development, NICB survey, 10/20, p.153
Railroads, 7/21, p.66

Carbides: See Tools (Cutting)

Carbon Dioxide:
CO_2 technique upgrades castings, 12/15, p.140
CO_2 welder makes casting repair easier, 11/17, p.110
Dual shield welding (CO_2 gas), 12/15, p.143

Carbon Steel:
Great Lakes, new series, 11/10, p.79
More electric furnaces for carbon steel, 10/13, p.108

Carburizing:
High temperature carburizing is practical (Ipsen), 8/4, p.98
Dew point monitoring pays off (Eaton), 10/13, p.100

Case Institute of Technology:
Keith Glennan, defense post, 9/15, p.110
Profile of a college senior recruiting graduates, 10/27, p.39

Caster & Floor Truck Manufacturers' Assn.:
Elects, 12/1, p.67

Casting, Castings:
Ansco Div.: Special machine ups quality on bronze instrument casting, 11/24, p.104
CO_2 (Azcast) technique upgrades castings, 12/15, p.140
CO_2 welder makes casting repair easier, 11/17, p.110
Carburetor castings, new processing line, 8/18, p.96
Copper and brass extrusion billets semicontinuous cast, 12/15, p.146
Gray iron, 4th quarter, survey, 12/8, p.145
Nonferrous, 4th quarter survey, 11/10, p.167
Centrifugal casting upgrades stainless, 7/28, p.69
Ductile beryllium castings studied for commercial use, 11/20, p.121
Intercast tech., jointed parts (eyeglasses), 8/18, p.99
Investment casting sales, 7/21, p.147
Malleable sales, production, 10/20, p.295
Press platens tears slashed, corrective repair practice, 12/1, p.74
Shell cores save machining, 9/8 p.102
Stainless inserts make strong threads for aluminum castings, 7/7, p.72
Steel casting shipments, 10/27, p.111
Vacuum casting tames supermetals, 10/20, p.191

Census:
Census Bureau statistics for '59-'60, 7/21, p.78; 11/17, p.97
U. S. population, 10/27, p.30

Ceramics:
Cercor ceramics, honeycomb structure for high temps, 10/6, p.86
Flame ceramics process, powders fed through flame gun, 10/20 p.188

Chamber of Commerce (U. S.):
'59 forecast, 12/15, p.85

Charitable Drives:
How to handle fund raising drives, 11/17, p.52

Charts, Tables:
Aluminum wrought products, buyers, 12/22, p.37
Russian production plans, 12/22, p.35
Steel ingots (see Production)
Steel products (see Shipments)
Vacuum melting producers, 12/1 p.103
World steel production, 12/29, p.32

Chemicals:
Kolene denamel dissolves porcelain, 12/15, p.130

Chile:
Chilean copper to Russia, 7/7, p.30

China:
All-out drive to catch up with West, 12/22, p.32

Code: B—*Briefs;* IE—*Industrial Equipment;* TO—*Technical Outlook*

Steel quota set, 9/22, p.43

Christmas Survey: See Management

Chrome:
Ferrochrome for steel and cast iron, 8/25, p.105
Iochrome, high purity, 12/8, p.128

Cleaning, Blasting:
Abrasive cleaning, weldment equipment, 7/7, p.66
Airless blasting table, weldment cleaning at Joy Mfg., 10/6, p.73
Chemical eliminates sandblasting, 12/22, p.63
Shotblasting mill scale from mild steel sheets, 8/18, p.98
Steel shot blasts panel contour, 7/7, p.68

Cleating Tool:
Modified cleating tool trims cost, 12/1, p.82

Cleveland Engineering Society:
Technical Center opens, pic., 9/1, p.54

Closed Circuit: See Radio, TV

Coal:
A look at raw materials, future sources, 9/15, p.153
Coal loading dock, railroad to ship, 10/6, p.51
Coal mixed en route to J & L ovens, 8/18, p.104
Conveyor belt, 8/18, p.104

Coatings: See Finishes, Coatings

Cobalt:
Studies for separating and recovering, 10/20, p.269

Coils:
Conveyor system for inspection of aluminum coiled sheets, 8/18, p.111
Tin plate shipping: What's inside the coil? 9/8, p.106

Cold Working:
Hot-cold forming boosts quality, prunes cost, ACF, 11/3, p.72
Warm heading tackles tough metals, 7/21, p.114

Colleges:
Recruiting curtailed by shortages; 20 types of men hard to find, 10/27, p.38

Columbium:
Designated columbium, not niobium, 9/1, p.78

Communications:
Closed circuit system, rolling mill, Northwestern Steel, 11/17, p.116
Closed circuit system, rolling mill, Dominion Foundries, 12/15, p.136

Company Operations:
Arkansas Louisiana Gas, diversification, 12/22, p.41
Bailey builds sales, 9/8, p.55
Baker Perkins: Job check costs, 9/22, p.47
Boyar-Schultz: Small firms can act faster, 10/20, p.136
Cummins controls inventory, 8/1, p.65
Inco: Ways to woo the buyer, 11/3, p.49
Inland control's finances (budget management), 7/28, p.43
Lear inventories get cash, incentives, 8/18, p.49
Motorola personalizes development by building better bosses, 7/14, p.64
Ohio Injector: Big company methods spur small firm's growth, 11/10, p.80
Vertol Aircraft: Research, new products and sales slump, 12/8, p.75
Worthington: Runs like federation of smaller firms, 11/17, p.67

Company Publications:
Editorial: What people want to know, 12/22, p.27

Components:
3rd quarter inventories, 7/7, p.95
4th quarter inventories, 10/6, p.111
4th quarter outlook, recovery quickens, 10/13, p.47

Construction:
'58 outlook, recession breaker, 8/25, p.65
'59 outlook, $51 billion, 11/3, p.42
Aluminum bridges, new market, 8/25, p.142
Aluminum bridge p.c., test at Lehigh Univ., 9/1, p.31
Aluminum bridge, Iowa, 12/15, p.179
Aluminum bridge, Reynolds-Borden, 10/27, p.136
ASM headquarters dome, 12/29, p.39
Bronze skyscraper-Seagram Bldg., 10/27, p.81
Borg-Warner skyscraper dedicated, curtain wall, 9/8, p.73
Chase Manhattan Bank, 8/25, p.124
Panel walls-metal curtains, gaining, 8/11, p.33
Reynolds' aluminum headquarters building, 9/1, p.30

Construction Machines:
Gradall for furnace maintenance, 12/8, p.116ss

Consumer Price Index:
Used in wage escalation, 7/28, p.38

Consumption:
Finished steel, '59 outlook, 12/29, p.76
Iron ore districts, 11/10, p.168
Steel-western states, '59 outlook, 11/3, p.33

Containers: See Packaging

Contractors:
Builders hit escalator clauses, 9/29, p.61
See Defense Contracts

Controls:
See Drives & Controls
See Numerical Controls

Conveyor Belts:
Coal belt, 8/18, p.104
Manveyors, TO, 8/25, p.79

Conveyor Equipment Manufacturers Assn.:
Elects, B, 11/17, p.91

Coolants: See Lubrication

Copper:
Copper and its alloys, trends in metals, STEEL survey, 10/27, p.75
Copper uses parallels sales, 12/1, p.128
Free World, deliveries, 11/24, p.158
Price gyrations, 10/27, p.30

Copper & Brass Research Association:
Outlook for nonferrous metals in autos, 9/1, p.41

Corporate Image:
Editorial: How's your corporate image? 9/22, p.35

Corrosion:
Corrosion map of U. S.: Sulfuric acid in the air, 9/1, p.37
Exploring the frontiers of corrosion, 7/7, p.82
Rust inhibitor eliminates need of painting steel stock right after forming, 8/25, p.98
See Finishes, Coatings

Cost Crisis Entries:
Adamas Carbide: Machine service unit gets rid of costly downtime, 12/15, p.132
Air Reduction Sales: Processing regulator bodies, 11/17, p.108
Ansco Div., General Aniline: Special machine jacks up quantity and quality, 11/24, p.104
Bliss Steel Products: Handling system trims sash cost, 9/22, p.82
Boeing Airplane: New methods meet the challenge of honeycombs, 9/1, p.60
Cambridge Wire Cloth: Integrated machines for wire crimp, 12/29, p.58
Converto Mfg.: We cut and weld on same equipment, 11/10, p.118
Eaton Mfg. Anvil Div.: Automation between machines nets $38,436 a year, 7/14, p.112
Eclipse Pioneer Div., Bendix Aviation: New equipment saves $17,589 a month, 10/27, p.92
Electric Steel Foundry: Six-point attack shatters inspection bottleneck, 12/8, p.112
General Foundry: Integrated cupola charging, 12/1, p.72
Grumman Aircraft: Automatic riveting-aircraft wing, 12/22, p.68
Manchester Tank & Equip.: Production revision slashes part cost, 9/29, p.86
Pioneer Industries Inc.: New layout saves $28.60 per unit, 7/28, p.64
Radiation Counter Laboratories: Our duplicator paid for itself in less than a year, 7/21, p.112
Reliance Electric: One turret punch press saves $2252.68 a month, 8/11, p.62
Studebaker-Packard: Foundry saves $29,448 a year, 10/20, p.199
Surface Combustion (Janitrol Div.): Preassembly cuts painting and handling cost, 8/25, p.80
B. K. Sweeney Mfg. Co.: Flexibility pays off on short lots, 8/4, p.96
Technicraft Laboratories: Better tooling cuts part cost 35%, 9/15, p.178
Towmotor: Abrasive cleaning saves us $40,000 a year, 7/7, p.66
Underwood Corp.: Cold header and thread roller cut costs, 10/6, p.74
U. S. Naval Ordnance: Our press paid for itself in one year, 10/13, p.102
Waldron & Co.: We cut product price 20% with more efficient machines, 9/8, p.98
Worcester Pressed Steel: Furnace slashes annealing costs, 11/3, p.70
Zenith Carburetor (Bendix Aviation): New line has a three-line payoff, 8/18, p.96

Cost Cutting:
18 often ignored ways to cut costs, 7/21, p.74
Comparison can help (Gray Iron Founders' program), 9/1, p.29
Industry takes new look at packaging, 7/14, p.72
Stamping (sprockets) cut costs, 9/1, p.63

Counters, Computers:
Computer determines stainless, 12/22, p.67
Computers move from bookkeeping to process control, steel plants, 9/15, p.156
Data accumulation system: What's inside the coil (tin plate shipping), 9/8, p.106
Data processing (NPS), metals uniformity by spectrometer, 7/21, p.122
How computers will help steelmakers, 11/10, p.126
J&L analog computer for research, 7/21, p.130
J&L computer-panel controls flow rates, sintering plant, 9/15, p.188

Customers: See Marketing

Cutting, Shearing:
Aluminum ingot scalping machines, 8/25, p.98
Cuts and welds on same equipment at Converto, 11/10, p.118
Flame cutter (forgings), five-torch unit, 10/6, p.77
Saws cut tough bronze extrusions, 11/3, p.88
Shear cuts on upswing, Birdsboro, 7/14, p.136

Cutting Tools: Steel Tools (Cutting)

D

Data Processing Equipment:
See Counters, Computers

Deburring:
Vibration deburring at Convair, aluminum spar caps, 10/6, p.83

Decentralization:
Rockwell decentralizes its standards departments, 12/8, p.70

Defense:
1959 budget, 8/25, p.54
ARPA report, 9/22, p.44
Army, Navy, AF programs, status, 11/24, p.64
Mitre Corp. takes over air defense system, 9/15, p.110
OCDM saves tool reserves for schools (NIER), 12/15, p.88
Space agency headed by Glennan, 9/15, p.110

Defense Contracts:
1959: Metalworkers to do 4% more defensework, 12/8, p.63
Aircraft-missile boxscore, contractors, 12/29, p.30
Aircraft and missiles, 9/22, p.32
Aircraft and missile '59 decrease, 10/6, p.10
Jet-missile cutback, 12/1, p.32
Minutemen contract soon, solid-fuel ICBM, 7/21, p.78
Missile contracts, how landed (Hugh Little report), 8/11, p.34
Missile decisions coming, 10/6, p.46
U. S. Steel brand birds" 10/13, p.52
See Renegotiation

Depreciation:
Bulletin F revision due, 11/3, p.46
Depreciation reform-MAPI proposals, 8/4, p.61
Depreciation reform (editorials) 8/4, p.53 and 12/1, p.35
Faster writeoff in new section, IRC, 11/24, p.59

Diecasting:
Industry-sales report, 9/15, p.252
Jointed parts diecast (eyeglass frames), 8/18, p.99
Polished zinc cut costs, AC Spark Plug, 9/1, p.76
Zinc diecastings for calibrated clamps, 7/14, p.136

Diemakers: See Tools & Dies

Distribution: See Warehousing & Distribution

Diversification:
Aids Arkansas Gas utility, 12/22, p.41
Vertol Aircraft, new products aid sales slump, 12/8, p.75
Worthington runs like federation of smaller firms, 11/17, p.67

Drafting:
Drafting made easier, eight rules, 11/3, p.75

Drawing:
Flotrusion, tube redraw for complex shapes, 12/22, p.64

Drilling:
Magnetic drill press used on transmission poles, 7/14, p.129
Gun drilling, Ford, TO, 9/29, p.85
Zenith Carburetor (Natco drills): New line has a three-year payoff, 8/18, p.96

Drives & Controls:
Control dial simplifies loading planks in forming dies, 9/29, p.89
Electrical 'firsts' update aluminum plant, 12/29, p.60
Electronics regulates Geneva strip mill, 10/27, p.94
Ingot buggy stops preset, magnetic amplifier control, 11/17, p.120
Lift truck Towmostatic Drive, pedal control, 10/20, p.271
Right materials boost drive speeds (Scott Paper Co.), 12/8, p.114
Spindle lubricator on steel mill drives, 9/1, p.76

Drop Forging Assn.:
Elects, B, 7/14, p.96

Ductile Iron:
Ductile iron for pulley drives, 12/8, p.114

Dust Collectors & Filters:
Filters whip fume problem at New Holland Machine, 11/17, p.126
Machine solves dust problem (for small plants), 7/21, p.130
Water test plots air flow patterns in electric precipitators, 11/10, p.124

E

Earthmoving Equipment:
Gradall, used for furnace maintenance, 12/8, p.116

Eastern Gas & Fuel Associates:
Philadelphia Coke div., 7/28, p.60

Editorials:
1959: No Pushover! 12 8, p.61
Can We Curb Inflation? 7 28, p.31
Can Soviets Overtake U. S.? 11 10, p.73
Depreciation reform: Let's Get Together! 12 1, p.55
Depreciation reform: Weapon against Soviets, 8 4, p.53
Don't Underrate Soviets, 9 8, p.43
How's Your Corporate Image? 9 22, p.35
Is Soft Sell Out? 10 6, p.37
Reciprocity: Good or bad? 9 1, p.25
Reciprocity Can Be Good, 11 17, p.55
We Neither Buy a point clear-gaining ticket, 9 29, p.53
Russia's Biggest Weapon? competitive, 11 24, p.55
Russia's New 40-Hour War, 7 21, p.29
Russia's Weakness, 7 7, p.33
Selling Any Buyer Wants? 8 18, p.13
Should Top Execs Help Sell? 12 15, p.79
Steel prices and inflation, 8 11, p.25
Steel's $61 00 question expansion of capacity, 9 15, p.101
Tell Your Price Story, 11 3, p.37
The Fifth Freedom right-to-work law, 10 13, p.73
The Future Won't Wait 7 14, p.25
The Hard Sell is Back, 12 29, p.25
What People Want to Know company publications, 11 17, p.27
What Price Obsolescence? 10 27, p.33
What Rotten Weather, 8 25, p.35
Why Strikes in the Right Way, 10 20, p.125

Export:
Industry's new export steel works, 8 1, p.29

Electric Motors: See Motors & Generators

Electric Overhead Crane Institute Inc.:
Elects president, 11 24, p.43

Electrical Equipment:
Semiconductor shipments sales, 12 8, p.66

Electrochemical Coatings:
New brief data for electrical, 9 22, p.80

Electrodes:
Nickel electrodes fit tricky welds, used to cut iron, 7 14, p.118
Welding electrode holder, 11 10, p.121

Electronic Fabricators, Assn.:
Defense procurement cuts, 10 6, p.33

Electronics:
Electrical effect locate aluminum flaws, 12 29, p.61
General Wire & Cable Co. Elect heater regulates strip mill, 10 27, p.91

Electroplaters:
Plating's big industry report, 7 7, p.37

Electroplating, Plating:
Flame plating cuts for missile engine components, 7 21, p.122
Nickel over phosphor bronze double plate process, most, 11 24, p.114
Silvabrite, new process, TO 11 3, p.69

Employment, Unemployment:
AFL-CIO campaign aimed at re-employment top, 12 1, p.31
Auto workers, 1 1, 7 28, p.55
Employment report, 7 28, p.34
Youths under 18, 10 27, p.47

Engineering Center:
Cleveland Engineering & Scientific Center opens doors, 9 1, p.54

Engineers:
Many jobs, many titles (varied activities), 10 13, p.69
Shortages for '60s, 10 20, p.126
Technicians and engineers, 10 27, p.40
Top talent tougher to get (20 types in greatest demand), 10 27, p.38
Youngsters program stimulated, 7 21, p.66

Escalation:
If you want to escalate know your indexes, 7 28, p.58

Europe:
European market: Integration by 1973, 8 18, p.55
See Foreign Trade

Executives: See Management

Expansion:
Aluminum: Slump better, sales improving, 9 8, p.48
Metalworking 'will up capacity 2.6%', 12 15, p.81
Metalworking plant investment, 9 15, p.103
Steel capacity editorial: $61,000 question, 9 15, p.101
Steel industry's giant today, bigger tomorrow, 9 15, p.109
Steel mills prepare for upturn, 7 21, p.60
Steel programs include, 12 1, p.31

Explosives:
Dynamic Corp. (explosive forming), 11 3, p.41 and 11 24, p.42
Explosive forming tackles big, tough products, 12 8, p.42
Explosives, 11 3, p.41
Explosives, 11 10, p.129
Explosives forming, 9 29, p.52
Ohio TO, 8 18, p.55
Welding (explosive) feds, 7 28, p.2

Export, Import: See Foreign Trade

Extrusion:
Cleveland Pneumatic Tool Co. forms titanium, 11 17, p.112
Cross section of copper wire, 12 1, p.59
Dow hot tests gear extrusion, 9 29, p.101
Pressure seal (Conforming) 11 3, p.41
Pressure seal (Conforming) 12 22, p.61
Process (Conforming) 11 3, p.41
Process (Conforming) 12 22, p.61
Rod extrusion, 11 3, p.41
Rod extrusion, 12 22, p.61
Steel extrusion press repair, 11 10, p.97

Fabricated Steel: See Shipments

Fabricating & Assembly:
Aircraft industry, 7 7, p.66
Aluminum, 11 10, p.91
Aluminum, 11 24, p.114
Aluminum fabricating and welding, 11 10, p.91
Aluminum fabricating and welding, 12 22, p.61
Fabricating, 7 28, p.61
Fabricating, 11 24, p.114
Fabricating, 12 22, p.61
Machine shop practice, 12 1, p.59
Personality cuts printing and binding cost, cuts cabinet costs, 9 29, p.90
Servo system for antenna assembly, 12 22, p.61
Welding, Welding Engr. Co., 7 14, p.118
Welding (Conforming) 11 3, p.41
Welding (Conforming) 12 22, p.61
Welding, Welding Engr. Co., 12 1, p.59
Welding, Welding Engr. Co., 12 22, p.61
Welding, Welding Engr. Co., 12 22, p.61
Welding, Welding Engr. Co., 12 22, p.61

Carbon corrected furnace (Republic), S/25, p.90
Continuous annealing furnaces (gas and electric), 7/28, p.72
Electric radiant oven aids finishing, 9/22, p.102
Electrits for carbon steel, 10/13, p.108
Furnace speeds vacuum treating, 7/21, p.126
Metal insulates furnace (GE), radiation shields, 12/15, p.119
Molten glass heats forging billets in rotary, gas-fired furnace, S/11, p.71
Skull furnace melts titanium scrap, TO, 9/8, p.97
Steel mill heat processing faster, 9/1, p.68

G

Gages:
Gage seminars search for closer tolerances, 10/27, p.93
Gauges, Wis., Utah, Gage pressure rolling process, 10/27, p.94
Hot strip width meters permit closer tolerances, 10/20, p.182

Gas: See Pipelines

Gas Appliance Manufacturers Assn.:
Industry report, gas equipment and appliances, 9/15, p.110

Gas Tanks:
LP gas tanks provided for methods evaluation, 9/29, p.90

Gears:
Precision gear testing, 9/8, p.100

Germany (West):
Foreign investment rules eased, 9/15, p.114
Foreign exchange, Bundesbank discount rate, 12/15, p.94
Leading producer of machine tools, 2/28, 11/10, p.70
Steel producing, 10/27, p.15

Glass:
Glass bottle seals ingots, billets, S/11, p.71

Government:
Antitrust & Monopoly
FTC limits excessive claims, 12/8, p.90
Kennedy seeks SEC attack, 11/17, p.61
Clearance post abolished, 11/3, p.96
Elections poll, 11/17, p.45
Electronic Machines?, 11/17, p.61
Elections, NLRB report, 11/17, p.62
Elections, Rockefeller and child labor, 11/10, p.62
Employment Act reviewed, 11/17, p.31
FHA inventory improvement urged, 10/20, p.119
Full Employment Act stymied, 12/22, p.21
GAO investment analysis program, 11/24, p.61
ICC rate test ban, 10/27, p.96
ICC approves locomotives exchange, 11/17, p.52
Ike gives go-ahead on expressway, 7/14, p.53
Labor law gains urged by Ike, March, 10/29, p.127
Labor reform bill coming, 11/3, p.96
Legislation 84th Congress, 84th Congress, 84th, p.61
Legislative trends: What will the Democrats do? 11/17, p.47
Machine tool reserve program, 7/28, p.27
Machine tool surplus, plans, S/4, p.62
Management statistics urged, 10/6, p.96
Memphis Case (gas pipe), Supreme Ct. reverses decision, 12/15, p.82
Memphis decision aids gas pipe expansions, 12/15, p.177
Minerals bill (Section revisions), House and Senate action, 7/7, p.118; 7/28, p.36; S/4, p.144; 9/1, p.105
NAS, new government post? 12/22, p.38
O'Mahoney bill seen on price hikes, 12/29, p.36
Patent system "bygone era", S/4, p.50
Patent system criticized, S/18, p.52
Patent processing time reduced; Russian system reported 10/27, p.12
Patman challenges SBA, 12/15, p.90
Pension bill evaluated, 9/8, p.52
Pension and welfare act, how to file, 11/10, p.78
RFC funds, reaction brewing, 7/7, p.42
Scientific management statistics, 10/6, p.16
Space agency, NAPA, 7/28, p.40
Standardization and cataloging system, 9/29, p.62
Strike rulings on nonstriking workers, 9/8, p.47
Supreme Court justices, pix, 12/1, p.29
Transportation bill, study, 7/7, p.42

Gray Iron Founders' Society Inc.:
Cost conversion study, 9/1, p.29
Grey iron, Ill., quarter on book, 12/8, p.115
Gould Automarkets and new uses, 10/20, p.127
Elects, 10/20, p.124

Great Britain:
Automobile report, S/25, p.12
Brass scrap 20c recovery, 12/8, p.78
Battery recession, steelmakers inventory position, S/11, p.29
Engineering estimate for steel capacity, 10/6, p.52
Scrap control to end, S/25, p.51
Steel mills plans, 11/17, p.52
Steel production, 1st half, S/25, p.51; 9/15, p.114
Steel production, owners study charts, 10/27, p.15

Grinding, Polishing:
Abrasive planing, cost cutting, 7/7, p.91
Automation between machines strikes snags, new hole grinder to be announced, 7/14, p.112
New jobs for abrasive belt grinder, 7/21, p.132
Oil-cooled belt, S/11, p.77
Quick method of fit for cast, loose abrasives for complex shapes, 12/15, p.150

Grinding Wheel Institute:
Elects chairman, E, 11/24, p.96

Gross National Product:
4th quarter outlook, 10/20, p.119
1954 and 1, 12/29, p.22
1956 outlook, 11/10, p.70

Guaranteed Annual Wage:
Scrap value seek aid for GAW, 12/15, p.93

H

Hawaii:
Bauxite samples fail test, 12/8, p.71
Industrial development, 11/3, p.33

Heat Treating & Annealing:
Alloy extends thermo life, 7/7, p.71
Aluminum, new developments for stress-relieved tempers, 10/6, p.76
Batch furnaces don't combine for production, ICF, 12/26, p.61
Cadmium Corp. plant cost cuts scrap paths, direct layout delivers, 10/6, p.72
Coil spring furnaces hike speeds, output, S/4, p.101
Continuous annealing lines for the production of Stainless Steels
When continuous annealing is economical, 7/28, p.72
Dow paint machinery (orthezine) pays off (Eaton), 10/13, p.149
Dow heat treats cast extrusions, horizontal approach, 9/29, p.134
Furnace studies show heat costs in bell, cost crisis, 11/3, p.70
Glass bath heats forging billets, S/11, p.71
Heat cuts nonferrous AFM report, 11/10, p.131
High temperature carburizing is practical, S/4, p.98
Morse cuttes shave repair costs, pickling equipment exposed to corrosives and rough treatment, 7/14, p.132
Overheat-fire detector on continuous strip system, 10/6, p.90
Salt bath electric immersion heaters, Chain Belt, 10/6, p.83
Stretch dies heat treated, S/4, p.102
Where faster heating saves, steel mills, 9/1, p.68

Heating:
Cooling and heating panels for office or home, 10/27, p.29
Wire mesh heating element's power water heater for airliners, 9/22, p.85

Helium:
Liquid helium, TO, 9/8, p.97
Dept. of Interior plant, Okla., 9/15, p.105

Highway Program:
AAA plan for funds; Defense dollars, etc., 10/20, p.132
Coast Scenic: Highway program for, S/25, p.11
Steel tonnage for roads, 10/27, p.31

Honeycombs:
Boeing Airplane: New methods meet challenge of honeycomb cost cutting, 9/1, p.69
Contracting honeycomb cores, Convair, TO, 9/29, p.75
Electrolytic cleaning core sections, TO, 10/13, p.99
Fabricating process (Tennessee) for metal sandwich honeycomb, S/25, p.96
Honeycomb, sandwich, advances in cladding, foil ridges forged into honeycomb cores, 9/29, p.102
Honeycomb series nonmetal cores, clipped seeds, and silver brazing alloys, 9/22, p.96

Horse Power:
Company offers free model rule bands, 12/22, p.27

Housing:
Design presents future homes, TO, p.
Prefabricated heat, cool, light, 10/27, p.29
Prefabs, industry report, 10/13, p.71
Steel framed panels, pre-, 11/10, p.79

I

Illinois Institute of Technology:
Appoints Prexy, extreme cost program, 10/23, p.148

Imports: See Foreign Trade

Incentive Systems:
Jack & Heintz boost productivity of indirect workers, 12/22, p.31
Lure investors at cash, S/18, p.19

Independent Wire Rope Manufacturers' Assn.:
Elects, E, 9/29, p.93

Indexes:
Wage relation of CPI and WPI, 7/28, p.38

India:
Steel production outlook by '61, S/25, p.12

Indium:
SUB and Indium, 9/29, p.19

Induction Heating:
Ohio Crankshaft heat treat equipment, building block completed, 11/3, p.76

Induction Welding: See Welding

Industrial Development: See Area Dev.

Industrial Diamonds:
U. S. Consumption; GE developments and prices, 11/10, p.85

Industrial Distributors:
Distributors being squeezed—battle recession, 9/15, p.108

Industrial Furnaces:
Orders for Aug., 10/6, p.33

Industrial Gas: See Oxygen

Industrial Hygiene Foundation:
Elects, E, 11/24, p.96

Industrial Shows: See Trade Shows

Industrial Suppliers:
Auto suppliers gage Detroit sales optimism, 10/20, p.125
Bellwether industry (editorial): The 'hard sell is back' 12/29, p.25
Value analysis outlined at International Harvester's Suppliers Relations Day program, 10/20, p.135

Infab Plants:
Space suits for technicians, 11/17, p.63

Inflation: See Editorials

Ingots:
Alloy ingot mold coating, 7/7, p.72
Aluminum ingot scalping machine, S/25, p.98
Tapered ingots fit fork lift trucks, TO, 7/7, p.65

Insert:
Metal Selector, 10/20, p.165

Inspection, Testing:
ASTM: Tests dormant constant temperatures, 9/1, p.77
Air-master, alloy inspector, 11/24, p.114
Dot tests surface elongation-mass, metals, 9/8, p.101
Gaging, TO, 9/29, p.75
Inspection efficiency, six proposals of Electric Steel Foundry, 12/8, p.113
Nondestructive test bid, units, American Chain, 9/29, p.97
Inductive check, TO, 7/28, p.53; 9/29, p.79
Reliable Farrowcast: For pipe, 9/1, p.62; for tube, 10/13, p.104
Service test program, Martin Co., 7/14, p.131
Stainless examines stock waves, measures intensity, heat and pressure, 7/14, p.115
Timing tested electronically, 12/22, p.79
Valve quality test, S/18, p.114
Vibration test combiner unit, S/4, p.102

Institute of Scrap Iron & Steel Inc.:
Ask removal of waterborne freight tax, 12/1, p.152

Instrument Society of America:
Elects, E, 9/29, p.93

Instruments:
Instrument sales, 7/28, p.45

Insulation:
Fibrous material keeps out heat, 12/15, p.131
Metal radiation shields for furnace, 12/15, p.119

Insurance: See Life Insurance

Insurance & Pensions:
Feeling the pinch for pensions? Key cost factors in pension plans, 11/17, p.68
UAW payments of pension benefits, S/4, p.19
Welfare-pension filing forms ready, 12/29, p.50
Welfare plan passed by Congress, what to do and when, 11/10, p.7

Inventories:
Commitments, 3rd quarter, 7/7, p.59
Commitments, 4th quarter, 10/6, p.111
Metal, 4th quarter, mill products, nonferrous, S/4, p.121 and 11/3, p.107
Steel: A closing for the better, '54 outlook, 11/24, p.52
Steel inventory trend—Line to climb in '59, 12/1, p.37

Inventory Control:
Cummins Engine program, S/4, p.65

Investment Casting Institute:
Meeting: Roni accountants urges management planning for profits, 11/24, p.69

Iron Ore:
A look at raw materials, now and future, 9/15, p.152
Accent is on quality ores (U. S. sources), 11/24, p.135

Antarctica source, Russian report, 11/3, p.34
Direct reduction HyL process for small plants, Mexico, 12/1, p.78
Iron ore statistics (chart), S/11, p.103; 9/8, p.134; 10/13, p.111; 11/10, p.174; 12/8, p.152
Missouri deposit, Pea Ridge, 11/17, p.60
Nickel plant (Copper Cliff, Ont.): New source for iron ore, 9/22, p.88
Ore outlook dim: U. S. Bureau of Mines report, 7/7, p.39
Quebec ore concentration mill (U. S. Steel), 9/8, p.40
Scale cars for safer ore handling, 12/15, p.136
Separator (Coronatron), TO, S/4, p.95
U. S. imports-'58, S/4, p.128; 9/8, p.48

J

Japan:
Kobe Steel Works gets loan, 9/8, p.40
Mesta builds rolling mill, 9/15, p.131
Nippon Kokan opens N. Y. sales office, 9/22, p.42
Sumitomo Metal expands, 8/25, p.42

Job Checks: See Work Standards

Job Definition:
Job definition frees development men from sales and production duties, 10/6, p.49

Job Shops:
Cranes move presses — machines taken to the work, 7/21, p.76

Joining:
Nickel joins dissimilar metals, 7/14, p.118

L

Labor:
AFL-CIO aim at re-employment lag, 12/1, p.31
AFL-CIO Goldberg proposes labor-management UN, 12/8, p.56
Arbitration cases up: How management can win more, S/4, p.67
Auto-UAW:
Auto (Big Three) united front still stands, Burns-Seaton solidarity, 7/28, p.33
Automakers - UAW demands: Walkout threat brakes recovery, 8/25, p.47
Metalworkers' views on auto strike, 9/8, p.56
Wage facts set new economic trends, 9/29, p.55
Wage settlements, past comparisons ('58-'51), 8/25, p.48
Bargaining table urged by Reuther (editorial), 9/29, p.53
Coal workers increase, 12/8, p.55
Complaints against unions and employers, 8/25, p.42
Escalation clauses, 7/28, p.38
Escalator clause on building contracts, 9/29, p.61
Escalation, employees reduced in C-O-L, 12/8, p.58
Fringe benefits average cost per employee, 8/11, p.21
Fringe benefits breakdown, Ohio Seamless, 7/21, p.65
GE bargaining, 8/4, p.49
GE-Westinghouse savings plan in lieu of SUB, 10/27, p.37 and 11/10, p.69
Indirect labor efficiency, how to boost, 12/22, p.31
Labor union curbs urged by Sen. Mundt, 10/20, p.137
McDonald, troubles ahead?, 8/18, p.39
McDonald faces showdown fight against Rarick, 9/8, p.45
McDonald backed by delegates, 9/22, p.38
Picketing ruling for nonstriking workers, 9/8, p.47
Right-to-work issue (see Right-To-Work)
Strike benefits paid by unions, 8/11, p.21
Strikes-trouble spots (firms), 12/8, p.57
Steel-dues protest, 12/29, p.19
Steel, past settlements ('49-'56), 12/22, p.30
United Steelworkers, finances, 7/14, p.56
Wildcat strikes, what they mean, 9/1, p.21
Young workers under 18 (booklet): Watch this labor market, 10/27, p.47

Labor-Management:
Goldberg (steelworkers and AFL-CIO counsel) proposes UN, 12/8, p.56
Handbook for labor-management relations (AIC), 7/28, p.49

Labor Surplus Areas:
State (Pa.) woos industry, 8/18, p.48
Trouble areas reported by Ewan Clague, labor commissioner, 10/6, p.46

Laboratories: See Research

Lake Carriers Assn.:
Seaway tolls contested, 8/4, p.57

Laminates:
Laminated transducer used in ultrasonics, 12/29, p.67

Lead & Zinc:
Barter system, how workable?, 12/8, p.168
Import quotas, 9/29, p.140; boost market, 10/6, p.136; system faces Customs Court decision, 10/20, p.132

Leasing:
More companies try leasing, Conference Bd. survey, 12/15, p.113

Lehigh University:
Aluminum bridge test structure shown, 9/1, p.31
Prof. Richardson report on work sampling, 10/6, p.44

Life Insurance:
Business insurance types carried by metalworking plants, 9/22, p.48

Loudspeakers: See Communications

Lubricants, Lubrication:
Bacterial inhibitor extends life of cutting oil, 8/25, p.51
Boiling coolant, combustion engines, TO, 9/22, p.79
Coolant clarifier aids aluminum products finish, 12/29, p.66
Coolant (water) stops rancidity, 7/7, p.70
Cutting fluids ups machinery efficiency, water-to-oil ratio, 11/17, p.113
Diecast release agent stops carbon, TO, 9/8, p.97
Grease cuts, throw-off waste from open gears, 7/21, p.116
Mill saves with multipurpose grease, TC&I test, 8/11, p.68
Nysorb ball retainers, improve lube for rotor bearings, 11/3, p.86
Oil control heat on precision grinding, 8/11, p.77
Oxygen-safe oil, explosive proof, 9/1, p.59
Spindle lubricator on steel mill, 9/1, p.76
Snythetic, fluid fireproof, 8/11 p.80

M

Machine Tool Industry:
4th quarter report, 8/11, p.77
1959-'60 outlook: Machine tool builders see upturn, 12/29, p.27
Age of machine tools in use today; buy new to meet boom, 11/3, p.34
American tools for Soviet, new ruling, 11/10, p.70
Automatic tool changers strike at downtime, 12/22, p.76
Behr-Manning coated abrasive machinery show, 7/7, p.45
Building block concept, Baker Bros. versatile machines, 9/22, p.95
Building block, Ford report, 10/27, p.98
Cutting-type tools, 1st half, 7/28, p.27
Distributors sales aid industry, 10/27, p.41
Efficient machines cut product price 9/8, p.98
Gage search, seminars, 10/27, p.98
GM lists machine tools (for reuse), 9/8, p.112
Obsolete machines; Film "The price of eggs", 8/11, p.77
Obsolescence (editorial), 10/27, p.33
OCDM moves to save NIER, reserve tools for schools, 12/15, p.88
Production hits a barrier, looks to space age tech., 11/24, p.112
Rebuilt tools bridge industry slump, 10/6, p.39
Special machine handles 36 varieties (Cessna), 8/18, p.102
Special machine jacks up quantity and quality, 11/24, p.104
Special machines: Extreme buyers market, 8/18, p.45
Standards depend on user, can be good or bad (building block approach), 12/8, p.127
Used tool inventory plan for location and sales, 11/10, p.70

Machine Tools & Attachments:
Diesinker, numerical control, 11/17, p.123
Drill press-pneumatic, control automation for making parts in short runs, 9/22, p.98
Drilling machine processes regulator bodies at Air Reduction, 11/17, p.108
Drilling machine Remington multiple-spindle, 11/10, p.134
Duplex milling machine scalps aluminum ingots, 8/25, p.98
Grinding sump machine, clean-refilled, 12/15, p.133
Sling speeds roll changes on grinder, 12, p.67
Vertical drilling machine, build block concept, 9/22, p.95
Welded base for grinder free from vibration, 10/20, p.270

Machinery & Allied Products Institute:
Booklet explains new section (IRC) for faster writeoff, 11/24, p.79
Depreciation study, S/4, p.53 and p.61

Machinery & Equipment:
Industry report, 12/1, p.32
Industry report, 1960's outlook, 9/29, p.49
Machine mounts move equipment, TO, 12/1, p.69

Machinery Dealers National Assn.:
Inventory plan for location-sales of used tools, 11/10, p.70

Machining:
Better tooling cuts port costs, microwave components, 9/15, p.178
Boring mill uses TV, GE steam turbine dept., 7/28, p.78
Castings machined on special machine at Ansco, 11/24, p.101
Complex shapes finished quickly at low cost, 12/15, p.150
Consider low-cost automation (pneumatically controlled drill presses), 9/22, p.98
Duplicator paid for itself (electronic chassis production-tem, plates), 7/21, p.113
Efficient machines cut product price, 9/8, p.98
Flexibility pays off on short lots: Automatic indexing on standards, S/4, p.96
Gage search for closer tolerances, seminars, 10/27, p.98
GE high boring unit, TV aids operator, 7/28, p.78
Hogging cuts-Aircraft "outcasts": Aircraft-missile makers urge rough machining replaced by precision forming, 11/24, p.102
Hot machining, experiments reported, 7/14, p.129
Machining obstinate aircraft metals, TO, 10/6, p.71
Machining time trimmed 22% (for split clamping rings), 8/18, p.112
New jobs for belt grinders, 7/21, p.132
Oldsmobile piston line: Belt lets parts slide freely, 7/14, p.124
Producibility barrier: Wanted-a revolution in manufacturing, 11/24, p.100
Quality control for short runs: Machinists at Parker check by "egg crate" system, 10/6, p.88
Solved: One titanium machining problem (airdraft generator shafts-GE), 9/29, p.92
Syncro housings at Eclipse Pioneer, new equipment, 10/27, p.93
Zenith Carburetor: New line has a three-year payoff, 8/18, p.93

Magnesium:
Magnesium dip brazed accurately, S/4, p.101
Magnesium enclosures for missile guidance system, 12/22, p.70
Magnesium tooling plates, sales, 8/18, p.47

Magnets:
Auto plant uses Magna-Rails for handling, 7/28, p.75
Handle (Indox magnets) eases steel lifting, 11/17, p.120
Handle pipe on fork lift truck, pic., S/4, p.58
Permanent magnets in form of rolls, easier handling of sheet steel, 7/14, p.118

Maintenance:
Clay gun plugs tapholes of blast furnaces, 8/25, p.102
Construction tool slashes furnace maintenance costs, Gradall, 12/8, p.116
Dow numbering maintenance report system, 11/24, p.67
Furnace checker cleaning, S/4, p.102
How to make maintenance productive, S/11, p.38
Machine service unit gets rid of costly downtime (cleans grinding machine sump pumps), 12/15, p.132
Numerical control systems, 12/8, p.108

Make or Buy:
Which road to profit? 10/13, p.95

Malleable Founders Society:
Heine tech. director, B, 11/17, p.91
Malleable castings, sale and production, 10/20, p.265

Management:
Building better bosses (Motorola), 7/14, p.64
Christmas gifts, company survey, 11/17, p.52
Christmas parties, bonuses surveyed, 12/8, p.67
College recruiting plans, 10/27, p.38
Executive ability, here's a way to measure (GE), 12/15, p.86
Executive compensation (see "Salaries")
Executive demand, survey, 7/14, p.56
Executives (memo): How to save time, 11/10, p.86
Foremen, how to pick and train, 9/1, p.32
Management Series:
Building marketing men, 9/22, p.69
Finding out what customers will buy, 7/14, p.101
Get ready for the new boom, 11/17, p.97
Purchasing for profit, 10/13, p.89
Surveying the market, 8/18, p.85
Market research manager: He charts the course to profits, 12/29, p.34
Planning termed key to company profits, 11/24, p.69
Plant superintendents: They carry the weight of production, 11/3, p.50
Purchasing director, management team, 12/1, p.48

Manufacturing Costs:
NICB study, 12/22, p.22

Markets: See Business (Markets)

Market Research:
Finding out what customers will buy, 7/14, p.101
Market research manager, a composite picture: He charts the course to profits, 12/29, p.34
Selling any buggy whips? (editorial), 8/18, p.43
Surveying the market, 8/18, p.85

Marketing:
Building marketing men, 9/22, p.69
Get ready for the new boom, 11/17, p.97

Masking:
Plastic masking aids platers, 12/1, p.75

Massachusetts Institute of Technology:
Forms Mitre Corp. (air defense system), 9/15, p.110

Material Handling Industry:
Industrial truck sales, 12/22, p.23
Handling trims sash cost (Bliss Steel), 9/22, p.82
Heavy loads handled easily (Nat'l U.S. Radiator), 9/22, p.92
Six ways to save handling (Lamson & Sessions), 8/11, p.64

Material Handling Equipment:

Conveyors:
Belt lets parts slide freely, piston machining line at Oldsmobile, 7/14, p.124
Conveyor system saves $111 a day (inspecting aluminum coils), 8/18, p.111
Dispatched conveyor cuts idle time (GE), 11/24, p.106
Magnetic conveyor handles auto parts, 7/28, p.75

Cranes, Hoists:
Crane to serve oxygen converter, 7/21, p.116
Cranes move presses (machines taken to the work), 7/21, p.76
Dual capacity hoist, TO, 10/13, p.99
Powdered metals improve hoists, 9/29, p.88

Crates:
Monel crates shave repair costs for pickling equipment, 7/14, p.132

Magnets:
Index magnets lift steel, "Bear-paw," 11/17, p.120

Storage:
Floor to ceiling racks: How to use your air rights with high-lift trucks, 11/24, p.118
Floor to ceiling, Retriever moves load, 12/1, p.84
Storage conveyor (Reliance): No waiting in this line, 8/4, p.108
Scrap storage boxes double for bins and handling units at Kaiser Aluminum, 7/14, p.116

Truck, Gas & Electric:
Decentralized battery charging for electric trucks, 9/8, p.103
Lift truck for heavy jobs, 9/22, p.92
Power drive, pedal action, 10/20, p.271
Trailer carrier handles big dies, 7/28, p.82
Water heater tanks moved by Vac-U-Lift unit, 7/28, p.76

Mellon Institute:
Elects, B, 12/8, p.104

Melting:
Levitation melts, uses, 12/22, p.63
See Vacuum

Mergers:
Bethlehem-Youngstown: Debate appeal of Weinfeld decision, 12/1, p.39; until Feb. for appeal, 12/22, p.21
Research needs lead to mergers, 12/29, p.36

Metal Furniture:
Industry report, 12/1, p.47

Metallurgy:
Creep test: Alloy may shrink rather than stretch, 11/24, p.117
Fatigue cracking, NBS tests, 11/3, p.86
Flash buttwelded rings, grain microstructure, 12/29, p.68
Forming molybdenum tubing: Grain size is key, 8/11, p.82
Micrometeorite bombardment used at Wright Air Dev. Center, alloying of solids, 10/6, p.77

Metal Ribbon:
Foil-thin metal ribbon formed into honeycomb core, 9/29, p.102

Metal Selector:
1958 edition, insert, 10/20, p.165

Metal Show:
Metal Show section, 10/20, p.157
STEEL polls showgoers on sales, research, products, 11/3, p.40

Metals:
Copper and its alloys, trends in metals, 10/27, p.75
Iochrome, high purity metal, 12/8, p.128
Missile use:
Aluminum-iridium, space metal, 8/4, p.50
Cerium, missiles, TO, 7/28, p.63
Martin lab, space age tests, 7/14, p.134
Titanium gets ready for space age, 7/14, p.116
Titanium MST beats heat barrier, 10/27, p.46
West Coast: Explosives' form space age shapes, 8/25, p.82
Samarium, rare earth for reactors, 10/6, p.140
Special alloys boost metalworking's future, 10/20, p.158

Metalworking:
2nd half profits, 8/4, p.55
4th quarter profits, 11/3, p.39
1959 capacity hike of 2.6% foreseen, 12/15, p.81
1959: No pushover (editorial), 12/8, p.61
1960: Get ready for the new boom, 11/17, p.97
Auto strike? What metalworking men think, 9/8, p.56
Atomic subs mean . . . mounting market for metalworking, 8/25, p.50
Defense work: Metalworkers to do 4% more, 12/8, p.63
Export trend (chart): Metalworkers to export 1.9% more, 12/22, p.45

Mexico:
Here's direct reduction for small plant's HyL process, 12/1, p.78
Steel growth, 7/21, p.73

Mines:
Automatic mining machine, TO, 12/22, p.63
X-rays zinc in mine wastes, TO, 9/29, p.85

Minerals:
Barter program, how workable? 12/8, p.168
National policy for aluminum industry needed, 9/29, p.50
Seaton Bill (see Gov't)

Miniaturization:
When is it needed and what is it? 7/28, p.44

Missiles:
Articles:
AMMO: Army shows missile power at Texas and N. Mex., 7/7, p.41 and 7/14, p.66
ARS conference: Missile potential soars, 9/22, p.39
Aircraft profits decline: Rough transition into space age, 7/7, p.35
Titanium gets ready for space age, 7/14, p.116
AF budget for '59, 9/8, p.39
Army plans moon rocket, 11/17, p.63
Atlas, cluster of rocket engines, pic, 9/29, p.61
Magnesium enclosures for guidance system, 12/22, p.70
Rail transportation, 10/6, p.33
Redstone engine changes, 9/22, p.39
Stainless camera pod on missile, 12/29, p.63
See Defense Contracts
See Space Age

Missouri:
Iron ore discovery, steel plant attraction, 11/17, p.60

Molybdenum:
Forming molybdenum tubing: Grain size is key, 8/11, p.82
How to forge molybdenum, 11/3, p.84

Monitoring:
Dew point monitoring pays off (Eaton carburizing), 10/13, p.100

Motion Pictures:
Obsolete equipment "The price of eggs", 8/11, p.77

Motors & Generators:
Fractional hp motors, industry report, 8/18, p.50
Integral hp electric motors, technology advance, 8/25, p.57
Self-cleaning switch, 10/6, p. 34

N

National Aeronautics & Space Adm.:
Approved, 7/28, p.40
Army's Redstone arsenal taken over, 10/20, p.120
Space projects, 10/13, p.54

National Assn. of Aluminum Distributors:
Elects, B, 12/1, p.67

National Association of Sheet Metal Distributors:
Elects, B, 10/27, p.70

National Association of Waste Material Dealers Inc.:
Elects, B, 8/25, p.76
Treasurer, B, 11/3, p.67

National Bureau of Standards:
Data processing records uniformity of metals and alloys, 7/21, p.122
Iron, steel samples offered, 10/6, p.73; prices, 11/24, p.99
Views on fatigue cracking, 11/3, p.86

National Electrical Manufacturers Assn.:
Elects, B, 7/28, p.61
Integral motors, frame sizes standards, 8/25, p.57

National Fluid Power Assn.:
Elects, B, 8/4, p.86

National Industrial Conference Bd.:
Executives meet, predict uptrend, 11/24, p.57
Expenditures for research and development, 10/20, p.153
Leasing, firms surveyed, 12/15, p.113
Manufacturing costs studied, 12/22, p.22
Strike benefits paid by unions, 8/11, p.21
Surveys research and development expenditures, 10/20, p.153

National Lubricating Grease Institute:
Elects B, 11/10, p.111

National Machine Tool Builders Assn.:
Annual meeting: Drop in capacity feared, 11/10, p.132
Headquarters moved to Washington, 12/22, p.76
Machine tool output reported by Such, 11/10, p.70

National Metallurgical Laboratory:
India steel report, pilot plant, 8/25, p.42

National Screw Machine Products Assn.:
Seminar: A look at 1970, 12/29, p.29

National Slag Assn.:
Elects, B, 11/10, p.111

National Tool & Die Manufacturers Assn.:
Elects, 12/1, p.67
Farm machines lead upturn, 11/17, p.51

Navy:
Rainmaking experiments, 10/6, p.51
Submarine-nuclear power by '60s, 9/8, p.52

New Plants: See Capital Expenditures

New Products & Development:
See Product Development

New York Central Railroad:
Missile transporting demonstrated, 10/6, p.33

Nickel:
Nicaro plant bidding (four firms), 9/22, p.31
Nickel-ore processing, Copper Cliff, 9/22, p.88

Nonferrous:
4th quarter outlook, 10/13, p.158
Year sales, shipments, 12/22, p.108
4th quarter outlook, 10/20, p.318
Aluminum entering new era, 11/10, p.190
Barter program revamped, 11/24, p.158
Barter program, how workable? 12/8, p.168
Free World deliveries, 11/24, p.158
Metalmen meet in London, 9/8, p.150
Nonferrous foundries, market report, 11/10, p.167
Outlook for nickel, magnesium, titanium, 7/7, p.29
Outlook for nonferrous metals in autos, 9/1, p.41
Zinc market boom, 11/17, p.178
See Individual Metals

Numerical Controls:
Boeing's Otto Pfugens says: You can afford to maintain numerical control equipment, 12/8, p.108
Diesinkers numerically controlled, 11/17, p.123
Order processing at Allis-Chalmers, Cardotype control unit, 12/8, p.71
Tape carries 83 channels at GE, TO, 12/8, p.107
Tape control speeds riveting, airplane wings, 12/22, p.68

Nylon:
Nylon tube on Sendzimir mill, 8/25, p.102
Nyseal ball retainers improve lube for rotor bearings, 11/3, p.86

O

Office of Civil & Defense Mobilization:
New procedures being drafted for imports aid, 11/10, p.78

Ohio:
Right-to-work laws, issue, 10/6, p.50

Oil and Gas Equipment:
Exports boost volume sales, 12/22, p.37

Orders & Inventory:
Allis Chalmers Cardotype control unit, renewal part order processing, 12/8, p.71
Clark warehouse, IBM and teletype, 9/8, p.51
Cummins Engine inventory control and production scheduling, 8/4, p.65
Reliance Electric conveyor line, 8/4, p.108

Outboard Motors:
Industry report, 7/14, p.63

Oxygen:
A look at growth in use, consumption, 9/15, p.154
Oxygen in electric furnace benefits producer and user, 11/24, p.108
Oxygen vessel bricks bonded with tar, 7/7, p.74
West leads in oxygen steelmaking, 11/17, p.63

Oxygen Generating Plants:
Acme Steel: Cupolas provide hot metal, Riverdale, 9/29, p.94
Bolsters oxygen supplies at: Granite City Steel and Erie Forge, 7/28, p.60
Granite City Steel installs, 9/1, p.78
Linde and Air Reduction plants, 10/6, p.67

P

Packaging, Containers:
Aluminum cans, industry gain, 7/28, p.36
Casks shield radiation fuel, 10/6, p.77
How to package long rods, 8/4, p.106
Industry takes new look at packaging, redesign means cost savings, 7/14, p.72
Package aids identification (of thermocouple wire), 9/8, p.110
Vibrating machine tests shipability, TO, 7/21, p.111
Vulcanized fiber containers, 12/29, p.70

Pails:
Pails handle wire, cost saving, 11/3, p. 82 and TO, 9/29, p.85

Paint: See Finishes

Paper Clips:
Production forecast, 7/28, p.28

Patents:
Lear inventors get cash incentive program, 8/18, p.19
See Government

Patenting:
Lead patenting of high carbon steel wire (Roebling): Patenting change makes wire better, 7/14, p.120

Pelletizing Machines:
Rollers have tungsten carbide coatings, 9/22, p.86

Pennsylvania:
New industries to labor surplus areas: State plan woos industry, 8/18, p.18

Pensions: See Insurance, Pensions

Phosphating:
Volvo (auto) mechanizes its phosphating line, 8/25, p.100

Pickling:
Pickle liquor disposal made practical, 7/28, p.76

Pilot Plants:
Bliss: Copper strip from powder, new process, 9/8, p.114

Pipelines:
Coal line, Ohio, 12/22, p.60
Gas lines needed, 10/20, p.120
Gas projects, steel needed, 8/18, p.48
Memphis case reversal by Supreme Ct., what it means for line pipe, 12/15, p.85
Memphis decision and to gas pipe line expansion, 12/15, p.177—

Pipe, Tubing, Fittings:
Nylon tubing for Sendzimir mill, 8/25, p.102
Pipe buttwelder leaves noflash, 9/22, p.84
Pipe field welding for public utility, portable units, 8/18, p.115
Pipe-tube 'Farrowtest' at Republic, 9/1, p.62 and 10/13, p.104
Plastic pipe, sales, 10/20, p.130
Seamless tubing: Bishop broadens range of 17-7 PH, 8/25, p.94
Titanium pipe for heat exchangers, 12/29, p.62
Tubing (Hunter Douglas):
Forming molybdenum tubing, grain size is key, hot worked and extruded into billets, 8/11, p.82
Impact extrusion takes on hard alloys, 9/1, p.64
Tubing tested electronically, 12/22, p.79
Welded tubing for connector rings, 8/25, p.105

Plant Expansions:
Armco heat treat mill, Houston, 10/27, p.63
Armco sinter plant, 9/15, p.105
Canco cod processing plant, 11/17, p.85
Carborundum plant, 8/11, p.54
Carborundum at Keasbey, 11/3, p.66
Inland tin plate mill, 7/14, p.89
J&L, at Pittsburgh, Cleve., Atlanta, 11/24, p.85
Kaiser hot strip mill, 7/28, p.78
Likens giant soaking pits, 9/8, p.112
Ormet alumina plant, La., 7/14, p.89
Oxygen and nitrogen plants, 10/6, p.67
Republic plate mill, Gadsden, 12/1, p.66
Steel mills, 7/21, p.99
TCI pickling line, B, 10/13, p.77

Plant Layout:
Pioneer Industries production line layout for gas tanks, 7/28, p.64

Plant Modernizing:
Plan before you build, 8/4, p.59

Plastics:
Corrugated panel of Fiberglas with aluminum foil between, TO, 8/25, p.79
NATO wants plastic weapons, 12/29, p.36
Plastic masking aids platers, 12/1, p.75
Plastic pipe, industry report, 10/20, p.130
Plastic tools gain cost-cutting stature, 11/10, p.138
Plastics buck the recession, industry report, 12/1, p.41
Sealing plastic locks in parts, 12/22, p.70

Plates:
Metals vie for tolling plate sales, duminum and magnesium, 8/18, p.47

Plating Sales:
Industry report, 7/7, p.37

Plumbing Brass Institute:
Elects, B, 12/1, p.67
Population: See Census

Porcelain Enamel:
Lead-free enamel more flexible, TO, 11/10, p.117

Porcelain Enamel Institute:
Appoints product engineer, 9/1, p.55
Elects, B, 10/13, p.80

Powder Metallurgy:
Copper strip process, Bliss, 9/8, p.114
For powder metallurgy parts select right sintering atmosphere, 7/28, p.80
Powder has high strength (Republic), 10/13, p.106
Powdered ceramic materials flame spray, 10/20, p.138
Powder metal shanks for cutting tools cut vibration, 10/6, p.78
Powdered metals improve hoists, 9/29, p.88
Vinyl powders, B, 8/11, p.80

Power Plants:
Aluminum Ltd. builds underground, 9/29, p.57

Power Transmission:
Breakthrough in handling extra high voltage (Westinghouse), 9/8, p.40

Precipitators: See Dust Collectors

Prefabs:
Homes, industry report, 10/13, p.50

Pressed Metal Institute:
Elects, B, 10/13, p.80

Presses:
Cranes move presses into position, 7/21, p.76
Turret press pays for itself (Naval Ordnance), 10/13, p.102
Turret punch press means savings (Reliance control panels), 8/11, p.62

Pressure Vessels:
Atomic reactor pressure vessels materials, 12/22, p.72

Prices:
Aluminum increase, 8/18, p.120
Aluminum freeze, 12/15, p.202
Editorial: Prices and inflation, 8/11, p.25
Editorial: Tell your price story, 11/3, p.37
Exotic metallic compounds, 7/14, p.161
Steel extras, revision soon, 12/22, p.88
Steel increase: How users will react, 7/14, p.64
Steel: Prices or break-even points?, 7/21, p.71
Steel increases: What they mean to you (costs to items), 8/11, p.27
Steel-wage increases (1952-58), 7/7, p.29
Steel-wage increases, 10 years, 8/11, p.39
Switchgear price war ebbing, 12/8, p.57
U. S. Steel exports up, listed, 8/18, p.49

Printed Circuits:
Metal sputtering tech., 11/3, p.69

Product Development:
Finding customers wants before building product, 7/14, p.102
Making development work (Superior Tube), 10/6, p.49
Metalshow poll, 11/3, p.40
New products: Avenue for profit growth, 11/17, p.102
New products boost sales at Bayar-Schultz, 10/20, p.136
Recession spurs research and development programs, 7/21, p.82

Production:
Blast furnace (Aug.) by states, 9/29, p.122
Blast furnace, 12/1, p.110
Metallurgical coke, 11/3, p.136
Silver, world output, 9/15, p.101
Steel prospects, 8/25, p.41
Steel: British, Franco-German, 9/15, p.114
Steel: Canada, other countries, 10/13, p.51
Steel: Mexico, 7/21, p.73
Steel ingots, 7/21, p.154; 8/18, p.138; 9/22, p.120; 10/20, p.302; 11/24, p.142; 12/22, p.93
World steel, 9/1, p.22; 12/1, p.31; 12/29, p.32

Production Processes:
Electronic chassis for nuclear energy industry, 7/21, p.112
Pails handle wire in lip motor production, 11/3, p.82
Space age techniques for machine tool industry, 11/24, p.112
Space age technology: 'Wanted: a revolution in manufacturing', 11/24, p.100
See Cost Cutting

Production Scheduling: See Orders

Producibility Barrier:
Wanted: A revolution in manufacturing, 11/24, p.100

Productivity:
Baker Perkins: Checking work standards on the job, 9/22, p.47
Erwin Clague reports gain, 11/3, p.93
How to boost productivity, consult your employees, 9/29, p.65
How to boost (Du Pont v.p. report), 9/29, p.50
How to boost efficiency of indirect labor, 12/22, p.51
How to measure it . . . how to boost it, 8/25, p.52
How to win worker support in changed methods, 11/10, p.69
Work sampling: Getting more from men and machines, 10/6, p.44
To boost productivity, consult your employees, 9/29, p.65

Profits:
1st National Bank report, 11/17, p.51
Get ready for the new boom: 65 outlook, 11/17, p.97
Planning key to company profits, 11/24, p.69
Purchasing for profits, 10/13, p.86
Sales and earnings (see Financial)

Public Relations:
Company publications, employees informed, 12/22, p.27

Purchasing:
Purchasing for profit (management series), 10/13, p.86
Purchasing director, management team, 12/1, p.48
Standards rout purchasing duplication, 12/29, p.62

Purchasing Agents Assn. of Chicago:
Elects, B, 7/28, p.61

Q

Quality Control:
Copper Alloy System ups valve quality, 8/18, p.114
Parker Aircraft machinist's check: Here's a simple quality plan, 10/6, p.88
TV-x-ray system (TVX), 9/22, p.42

Quenching:
Patenting change makes wire better, hot-rolled rods, 7/14, p.120

Questionnaire:
How to get the most out of a questionnaire, 7/14, p.108

R

Radar Systems:
Magnesium (wave guides) dip brazed, 8/4, p.101

Radio & Television:
Closed circuit TV: Kaiser aluminum plant, 12/29, p.60
Closed circuit communication at Northwestern Steel rolling mill, 11/17, p.116 and Dominion Foundries mill, 12/15, p.136
Closed circuit sales: Industry's electronic eye, 7/21, p.81
GE-steam turbine dept.: TV for huge boring unit, 7/28, p.78
TV cameras control slabs at J&L, 9/22, p.88
TVX system: tool for quality control (Television-x-ray), 9/22, p.42

Railroads:
AAR reports operating costs cut, 10/6, p.43
Hopper cars for steel mills, 9/8, p.116
Trx s-ll-help plan, 10/13, p.41
See Freight Cars, Freight Rates

Raw Materials:
Steel industry takes A look at raw materials, 9/15, p.152

Reciprocity:
Editorials:
Reciprocity, good or bad?, 9/1, p.25
Reciprocity can be good, 11/17, p.55

Reclamation:
More spiegeleisen: Electric arc furnace recovers manganese ores, 9/8, p.116

Recruiting:
Top talent tougher to get; 20 types in short supply, 10/27, p.38

Reduction:
Electrothermal, one-step, reduction process for metallic oxides, 11/3, p.82
See Iron Ore

Refractories:
How to make refractories behave in vacuum melters, 8/25, p.88
New cellular refractory, also called Foamsil, TO, 7/21, p.111
Refractory sales, industry report, 7/14, p.155
Tar bonds oxygen vessel bricks, 7/7, p.74

Renegotiation:
Needed: Changes in renegotiation laws, 8/11, p.50
STEEL's study for reform. What's wrong with renegotiation, case histories, 11/24, p.62
Lack of unity may stall foes of renegotiation's three plans of attack, 12/1, p.42
More defense dollars mean renegotiation's here to stay (estimated spending), 12/8, p.64

Rensselaer Polytechnic Institute:
Nuclear study facilities, 12/22, p.67

Replacement Parts:
Replacements boost sales, 10/13, p.57

Research & Development:
Case Institute study (aimed at profits), 11/10, p.87
Expenditure (surveys):
AMA, 9/8, p.39; 12/8, p.75
NICB, 10/20, p.153
National Science, 11/17, p.67
Market research, what it can do, 8/18, p.86
Martin lab: Space age test program, 7/14, p.134
Recession spurring research and development programs, survey-metalworking, 7/21, p.82
Steel mill for Syracuse Univ. serves research, 8/11, p.84
Westinghouse lab: Exploring the frontiers of corrosion, 7/7, p.82

Right-to-Work:
Editorial: The fifth freedom, 10/13, p.45
Five crushing defeats halt movement, 11/10, p.77
Ohio issue, 10/6, p.50; 8/11, p.21; 9/1, p.22

Rivets: See Fasteners

Roads: See Highway Program

Rocket Booster:
Explosive forming tackles big tube, 12/8, p.128

Rolling Mills:
Empire-Reeves strip line gets reversing roughing stand, 10/6, p.80
Morgan gage control for hot strip width, 10/20, p.182
Pelletizing rollers have tungsten carbide coat, 9/22, p.86
TV communications system in m.s. 11/17, p.116; 12/15, p.126

Rubber:
Synthetics for industrial goods, S/4, p.60

Russia:
AISI report published, 9/8, p.40
AMA speakers discuss Soviet trade strategies, 11/17, p.59
Editorials:
Can Soviets overtake U. S.? 11/10, p.73
Don't underrate Soviets, 9/8, p.43
Russia's new hot war, 7/21, p.69
Russia's weakness, 7/7, p.33
Russia's biggest weapon, U. S. apathy, 11/24, p.55
Iron ore veins in Antarctica, 11/3, p.34
Patent system, 10/27, p.42
Production plans, decent op. industry (chart), 12/22, p.34
Railroads expand faster, 9/22, p.31
Reds make aluminum war, 7/21, p.77
Special report: Soviet steel industry (Irwin Stolz), 9/8, p.85
Steel men visit U. S., 9/22, p.42; reactions, 10/20, p.128
Tin shipments to Great Britain and Netherlands upset market, 9/22, p.42
U. S. plastic executives report tour, 7/28, p.31

Rust Preventive: See Corrosion

S

St. Lawrence Seaway:
Great Lakes route sought, 12/22, p.22
Port improvements pending, 7/7, p.30
Seaway tolls contested, S/4, p.57

Safety:
Spice suits for technicians in airless In-Fab plant, 11/17, p.63

Salaries:
Executive pay, AMA survey, 12/15, p.88
Executive pay highest in iron, steel industry, 9/1, p.38
Middle managers, 7/21, p.65
Plant superintendents, 11/3, p.51
Purchasing directors, 12/1, p.185
Salesmen, 7/14, p.65
Steel management forego safety boosts, 7/14, p.56

Salesmen:
Earnings, AMA survey, 7/14, p.65
Machine tool salesmen, 9/1, p.39

Sales Programs:
Consumer-style selling, Bailey Meter, 9/8, p.55
Editorial: Is soft sell out? 10/6, p.37
Editorial: S'hould top brass help sell? 12/15, p.79
Get the most out of your sales forecasts, S/18, p.90
Inco: Ways to woo the buyer, 11/3, p.49
Industrial supply industry: The hard sell is back (editorial), 12/29, p.25
Needed: Hard-time selling, S/11, p.32
Phone selling potent sales booster, S/25, p.59
Sales cycles pose problem for Vertol Aircraft, 12/8, p.75

Sales Show: See Trade Shows

Salt Baths: See Heat Treating

Satellite Stations:
Relay stations for post offices U.S.-Europe: Metzger (RCA) addresses ARS, 12/8, p.79

Scale Manufacturers Assn., Inc.:
Elects, E, 8/18, p.77

Scalping: See Cutting, Shearing

Science:
Industry push for youngster training, 7/21, p.66

Science Center:
Washington-Rockville Indus. Park, 12/15, p.113

Scientific Apparatus:
Sales, industry report, S/11, p.37

Scientific Apparatus Makers Assn.:
Scientists, engineers survey, 10/20, p.129

Scrap:
British control relaxed, S/25, p.51
GAW sought by scrap sellers, 12/15, p.93
Honeycomb scrap upgraded, reclaimed alloys, 9/22, p.96
Liberty ships scrapped, S/25, p.41
Lipsett improves grade of scrap from burned autos, 12/8, p.74
Scrap handling, storage bins, 7/14, p.115

Screw Machine Products:
Industry report, bellwether rolls, try, 7/28, p.27
1970 forecast, 12/29, p.29

Screw Machines:
Lodge-Weed, automatic machines, 10/6, p.78

Screw Setters: See Fastening

Sealing:
Sealing plastic locks in, p.108, 12/22, p.70
Teflon seals macroscopic pores in metal, 12/8, p.122

Secretaries:
Space Age secretaries, 10/6, p.75

Semiconductors: See Transistors

Sheet & Strip:
Aluminized steel sheets, Armco, 9/22, p.113
Auto sheet, ghost line defects, 12/22, p.47
Copper strip from powdered metal, 9/8, p.114
Missile sheet steel, 9/1, p.31
Sheets demand starts, 4th quarter, 9/1, p.85
Silicon sheets, markets, 9/29, p.115
Wide strip for rocket motors pack rolled, 12/22, p.30
Width meters trim strip waste at hot mill, 10/20, p.182

Shipments:
Fabricated steel Aug., 10/6, p.35
Finished steel, S/11, p.101; 10/13, p.162; 12/22, p.92
Manufacturers' shipments and new orders, July, 9/8, p.55
Service center shipments, 11/17, p.183
Steel: Autos set pace in 4th quarter, 9/22, p.37
Steel by markets: 7/28, p.97, 9/29, p.144; 10/27, p.133; 11/17, p.159; 12/29, p.78
Steel mill shipments, 1st half (chart), S/18, p.131
Steel product shipments: S/4, p.127, 9/22, p.115; 10/27, p.118; 11/17, p.159
Steel shipping barrels and drums, S/25, p.146
Trends in steel shipments, 9/15, p.173
Tubular products, S/4, p.124

Shipping:
Floating drum gondolas for bulk, TO, 7/28, p.63
Inland waterway traffic, 11/17, p.61

Ships, Shipbuilding:
Barge for inland waterway, 11/17, p.61
Cargo sub freighters, S/25, p.41
Cargoliners subsidy sought by Farrell Lines, 10/13, p.42
Liberty ships scrap plan, S/25, p.41
Nuclear ships feasible, 9/8, p.40
Replacement program, S/4, p.66
Shenango orders ore ship, 12/29, p.29
Submarines (see Atomic Energy)

Shotblasting:
How far can you go with shotblasting? Mill scale from mild steel sheets, S/18, p.98

Shot Peening:
Steel shot blasts (airfoil) panel contour, 7/7, p.68
Peentorming steel, aircraft, TO, 7/14, p.111

Silicon:
Silicon sheets, markets, 9/29, p.115

Silver:
Industrial uses for silver increase, 9/15, p.101

Sintering:
Mix is key to better sinter, 7/21, p.120
Pick right atmosphere to sinter iron, 7/28, p.80
Self-flux sinter, 11/3, p.78
Sintered molybdenum, new dev., 11/3, p.84

Small Business:
Big help for little firms (new funds); SBA changes and Investment Act resume, 9/15, p.106
More defense money for small firms? 10/13, p.54
Procurement awards only 6%, S/25, p.42
Small firm can act faster (Bovar-Schultz), 10/20, p.126
Small firm's growth spurred by big company methods (Ohio Injector), 11/10, p.80

Society of Aircraft Materials & Process Engineers:
Formed, E, 12/15, p.124

Society of Automotive Engineers:
Elects president, E, 12/29, p.43

Solar Energy:
Army solar furnace operates, 9/29, p.62
Space vehicles powered by sun, 7/21, p.78

Solid Carbide Tool Institute:
Reorganized, E, 11/17, p.91

Sonic Futurama:
Listen to the future, 9/15, p.113

South America:
Argentine steel mill, Loftus contract, 12/1, p.66
Brazilian steel plant, 12/22, p.60
Brazilian alloy steel firm expands, loan granted, S/11, p.32
Venezuela, U. S. metal exports, 7/28, p.35
Willys plans small car revival in Brazil, 7/28, p.47

Southern Association of Science & Industry:
South increased industrial output, 10/6, p.43

Space Age:
Agency (NACA) agreed upon, 7/28, p.10
Agency (NACA) headed by Glennan; assisted by Dryden, 9/15, p.110
Editorial: Your stake in the Space Age, 10/20, p.123
Explosives form space age shapes, S/25, p.82
Space program slow (Dryden reports), S/18, p.52
Space age secretaries, 10/6, p.43
Space age test program (Martin Co.), 7/14, p.134
Wanted: A revolution in manufacturing, 11/24, p.100
See Metals

Space Suits:
Technicians wear in, in fab plants, 11/17, p.63

Specifications:
ASTM approves basic oxygen process steel, 9/22, p.95
Nonferrous - ferrous handbook, 11/10, p.124

Spiegeleisen:
Supply for future, 9/8, p.116

Spinning:
Metal spinning research, TO, 12/15, p.127

Spring Garden Institute:
Frommelt report: Tool vibration cut by powder metal holding shanks, 10/6, p.78

Springs:
Coil spring, heat treat line, S/18, p.101
Spring wire, longer life with cross extrusion, 12/1, p.70
Torsion springs on cars, report, S/4, p.69

Sprockets:
Stamping cuts costs, 9/1, p.63

Stainless Steel:
1959 market outlook, 11/17, p.153
410 type: Centrifugal casting upgrades stainless, 7/28, p.69
AISI type D319 new, 11/10, p.134
Stainless camera pod on missile, 12/29, p.63
Stainless honeycomb reclaimed, 9/22, p.96
Stainless inserts form solid threads for aluminum castings, 7/7, p.72

Stamping:
Stamping (sprockets) cuts costs, 9/1, p.63

Standards:
Standards rout duplication-purchasing, 12/29, p.62
Making standards work, Rockwell decentralizes departments, 12/8, p.70

Standards Engineers Society:
Annual meeting stresses standards, 11/10, p.79

Steel Industry:
1960 capacity: Editorial, Steel's 86[,]000 question, 9/15, p.101
1975 capacity: A giant today, bigger tomorrow, 9/15, p.119
A change in steel mill products, 9/15, p.172
A changing look at steel plants, 9/15, p.156
Average operating capacity for '58, 12/15, p.81
Average price boost per ton vs. hourly employment cost increase (1952-'58), 7/7, p.29
Average wage-price record, ten years, S/11, p.29
Automakers buy steel for '59, 7/28, p.91
Autos set pace in 4th quarter, 9/22, p.37
Break-even point, J&L, 7/21, p.71
Breakeven point: Route to better decision making, 12/1, p.40
Labor prospects ominous as steel girds for '59, 12/22, p.29
Mexican steel growth, 7/21, p.73
Price increase (see Prices)
Rated tonnage used, 10/27, p.30
Secondary steel demand, 9/15, p.224
Steel extras stable next half, 12/22, p.88
West Coast leading producer, electric steel ingots, 9/1, p.85
Where world steel is expanding, 12/29, p.32
See Consumption
See Financial
See Inventories
See Prices
See Production
See Shipments

Steels:
Airsteel X-200, 9/8, p.104
'Aging' problems, remedies closer, 7/7, p.38
Bar steel new, Jalcase 100, 9/29, p.102
Brass-plated steel, E, 10/6, p.111
Carbon steel GLS-W, new at GLS, 11/10, p.79
How to get more from high strength alloy steel, 11/17, p.128
Superstrength missile steel hardens in air (Airsteel X-200), 9/8, p.104

Steel Door Institute:
Elects chairman, E, 8/4, p.86

Steel Founders' Society of America:
Industry report, upturn begins, 10/27, p.111

Steelmaking:
Acme Steel installs cupolas for Riverdale oxygen converters, 9/29, p.94
Automatic feeder for ladle, 9/22, p.96
Automatic pouring (ingotrol) ups yield at Republic, S/4, p.104
Barrel furnaces boost stainless bar production, 12/29, p.64

Code: B *Briefs;* IE *Industrial Equipment;* TO *Technical Outlook*

Billet-bar turned by magnet, S 11, p.84
Coal mixed en route to ovens, J&L, S 18, p.104
Computers, how they help steelmakers, 11/10, p.126
Construction tool (Gradall) slashes furnace maintenance costs, 12/8, p.116
Continuous strip overheat detectors, 10/6, p.90
Control system (panel) handles flow rates of materials at J&L, 9/15, p.188
Direct reduction process for small plants, Mexican firm, 12/1, p.78
Electrics (motor) for carbon steel, 10/13, p.108
Electronics regulates strip mill, Geneva Wks, 10/27, p.94
Forging reactor parts, material solves problems, 12/22, p.72
Heating methods for billets, tubing, forgings: Where faster heating saves, 9/1, p.68
Integrated cupola charging, 12/1, p.72
Loudspeaker forging systems, 11/17, p.146
Mill saves with multipurpose grease (TC&I tests), S 11, p.68
MAN is key to better sinter, 7/21, p.120
Oxygen vessel bricks bonded with tar, 7/7, p.74
Oxygen in electric furnace benefits producer and user, ore vs oxygen refining, 11/24, p.108
Patenting change makes wire better (Roebling), 7/14, p.120
Remedies for steel aging closer, 7/7, p.38
Self-fluxing sinter: Boon for equipment, 11/3, p.78
Strip output doubled at Empire-Reeves, reversing intermediate roughing mill, 10/6, p.80
TV (communications) links rolling mills, 12/15, p.136
Vacuum methods (see Vacuum)
What's inside the coil? Data accumulation system, 9/8, p.106
Width meters trim strip waste, automatic gages on Morgan hot mill, 10/20, p.182

Steel Mill Products:
Inventories, 4th quarter, S 4, p.124; 1st quarter, 11/3, p.107
The change in steel mill products, 10 year outlook, 9/15, p.172
Higher price on extras seen, 12/22, p.88
Steelmen meet import threat, Commerce statistics, 10/27, p.35

Steel Mills:
Alaskan bar mill, S 25, p.49
Argentine, Lotus contract, 12/1, p.66
Brazil plant, 12/22, p.60
Blooming structural mill, U. S. Steel, 9/29, p.82
Egypt builds, S 4, p.59
Indian pilot plant, S 25, p.42
Japan gets rolling mill, 9/15, p.131
Kaiser 86-in. hot strip mill, 7/28, p.78
Los Angeles, Soule Steel, S 25, p.76
Missouri iron ore woos steel plants, 11/17, p.60

Stock Plan:
Looking for an employee stock plan? AMC, 7/7, p.40

Storage:
Reliance Electric conveyor: No waiting in this line, S 4, p.108
Scrap boxes, Kaiser Aluminum, 7/14, p.115
Vertical floor to ceiling: How to use your air rights with high-lift trucks, 11/24, p.118
Vertical floor to ceiling: Triax-Retriever system, 12/1, p.84

Strategic Industries Assn.:
Small missile firms trouble reported by Marscholk, 7-14, p.56

Strikes: See Labor

Structurals:
Structural aluminum market, 12/15, p.179
Structural steel bookings, 11/3, p.34

Submarines: See Atomic

Suggestion Awards:
Industrial and government workers for '57, 9/8, p.55

Superintendents: See Management

Supplementary Unemployment Benefits:
Detroit: sizes up SUB as labor issue, 9/1, p.27
Indiana and SUB, 9/29, p.49
Michigan ESC rejects AMC plan, 10/6, p.33
Ohio case, steel firms and union loss, 12/8, p.56
Ohio: New law may be proposed in Jan., 12/15, p.89
Westinghouse, GE buck trend, 10/27, p.37

Suppliers: See Industrial Suppliers

Supreme Court Justices:
Pictures, 12/1, p.39

Surface Elongation:
Die tests elongation of metal samples, 9/8, p.101

Surface Treatment:
See Cleaning & Blasting
See Finishes, Coatings
See Shotblasting

Surveys:
Is industries (McKinsey): Executive pay—iron and steel; industry comparisons for sales, assets, profits, 9/1, p.38
Aircraft backlogs decline: Census Bureau and CAA, 7/7, p.35
Copper report, STEEL, 10/27, p.75
Engineer recruiting: Hoff, Canny, Bowen, 10/27, p.38
Leasing Conference Bd., 12/15, p.113
Plant and equipment spending: Commerce and SEC, S 15, p.103
Research and development spending: AMA, 9/8, p.39; NICB, 10/20, p.153
Special machine buying, STEEL, S 18, p.46
See Inventories

Syracuse University:
Gets old Weirton cold mill for research, S 11, p.84

T

Tantalum:
Supply, 11/10, p.77

Tape Control: See Numerical Controls

Taxes:
Air conditioner excise? 7/14, p.55
Baltimore exempts new industries from local tax, 7/28, p.45
Bulletin F revisions due, 11/3, p.46
Corporate taxes—higher coming? 9/1, p.34
Faster writeoff allowed, IRC section, 11/24, p.59
Prospects for taxes, 12/15, p.76
Small business depreciation aid proposed, 7/14, p.55
Transportation of goods tax removed, 7/28, p.28

Technicians:
Space-suited technicians at In-Fab plant (airless), 11/17, p.63
Technicians training pays: Aid to engineers, 10/27, p.40

Technology:
Technology boosts integral hp motors, S 25, p.57

Texas:
Rescinds ban on use of imported steel in road building, S 11, p.21

Texas Mid-Continent Oil & Gas Assn.:
Meeting, Tyson warns on controls, 10/20, p.129

Time Saving:
Memo to busy executive, how to save time, 11/10, p.56

Tin:
Buffer Pool (ITA) withdraws price support, 10/6, p.45
Russia upsets tin market, 9/22, p.43

Tin Plate:
Coiled shipping, data accumulation system, 9/8, p.106
Continuous annealing lines in operation, 7/28, p.72

Titanium:
Hot (Yoder) roll forms titanium at Boeing, 11/17, p.114
Mallory-Sharon: Titanium alloy 1st grows, 10/13, p.118
Mallory-Sharon (MST ss1): Titanium busts heat barrier, 10/27, p.46
Solved: One titanium machining problem (aircraft parts at GE), 9/29, p.92

Titanium gets ready for space age, 7/14, p.116
Titanium base alloys, new at Crucible, TO, 7/7, p.65
Titanium tubing for heat exchangers, 12/29, p.62

Tooling Plate:
Metals vie for plate sales, S 18, p.47

Tools: see Plastics

Tools & Dies:
Bellwether industry, uptrend, 7/28, p.55
Detroit tool shops fight for lives, 12/8, p.81
Die tests surface elongation of metals, 9/8, p.101
Diesinkers numerically controlled, 11/17, p.123
Handles big dies (trailer), 7/28, p.82
New Kirksite (Hi-Flex) for short run dies, 7/28, p.88
Plastics for dies, new uses, TO, 9/8, p.97
Polished dies, AC Spark Plug, 9/1, p.76
Stretch dies heat treated, S 4, p.102

Tools (Cutting):
Ceramic tools: You can make pay off, 12/15, p.128
Choosing carbides, 7/7, p.84
Coating upgrades low cost tools, spark deposition, 7/21, p.118
Prices resharpened, industry report, 10/13, p.53
Saws cut tough bronze extrusions, 11/3, p.88
Single-diamond dresses double grinding wheel, 12/15, p.134
Tool vibration cut with powdered metal shanks, 10/6, p.78
Toolholder with throwaways for stainless cutting, 12/22, p.67

Tools (Hand):
Wrench disarms billets (CF&I), 9/29, p.105

Trademarks:
Trademarks can help you build a company image, 12/8, p.95

Trade Shows:
Behr-Manning shows coated abrasive grinders, 7/7, p.45
County fair new look for industrial shows, 9/22, p.41
The revolt of Sheldon Schmaltz (how to get nothing out of exhibits), 11/24, p.68

Training:
Training marketing men, 9/22, p.76

Transducers:
Transducer widens use of ultrasonics, 12/29, p.67

Transistors:
Sales, 12/1, p.32; 12/8, p.66

Transportation:
Cargo missile for supplies to front line troops, 10/27, p.46
Helicopter for industrial materials, 10/27, p.47

Tri-State Structural Steel Fabricators Assn.:
Elects, B, 11/3, p.67

Trucks, Trailers:
Carrier trailer handles big dies, 7/28, p.82
Interchanging trucktrailers system approved by ICC, 11/17, p.52
Trucktrailer sales, piggybacking and containerization, 9/22, p.40

Tubing: See Pipe, Tubing, Fittings

Tubular Parts:
Here are two shortcuts for complex parts, Metal Gathering and Flotrusion, 12/22, p.64

Tubular Products:
Shipments, S 4, p.124

Turbines:
Gas turbine engine for boats, TO, S 25, p.79

U

Ultrasonic Manufacturers Assn.:
Elects, B, 12/8, p.104

Ultrasonics:
Sales of equipment for nonmilitary use, 10/27, p.29
Ultrasonic seam welding, TO, 12/15, p.127
Vision for tomorrow, TO, 12/1, p.69

Unions: See Labor

Uranium:
AEC announces production, 10/6, p.43

V

Vacuum:
Cryopumping device freezes out to produce vacuum, 11/17, p.123
Furnace steels vacuum treating, 7/21, p.126
How to make refractories behave in vacuum metal furnace, S 25, p.88
Stokes vacuum melt furnace for Beryllium, 9/8, p.56
Vacuum casting times supermetals (firms using), 10/20, p.194
Vacuum melting gains (producers), 12/1, p.103

Value Analysis:
Suppliers' Relations Day at International Harvester outlines value analysis, 10/20, p.135

Valves:
Copper Alloy quality control systems ups quality, S 18, p.114

Venezuela: See South America

Vibration:
Cutting tool vibration cut with powder metal shanks, 10/6, p.78
Vibration: deburring aluminum spur cogs at Convair, 10/6, p.83

W

Wages:
AFL-CIO study wage settlements 1st 6 mos., 9/15, p.97
Auto wage settlements (AIC): yearly comparison, S 25, p.48
Coal operators absorb hike 12/8, p.55
Escalation for pricing and determining wage increases, 7/28, p.38
Hourly earnings, Slichter report 7/28, p.28
Ohio production workers increase, 11/10, p.69
Steel: Average weekly pay check climbs, 10/6, p.42
Steel, average hourly wages, 10/13, p.42
Steelworkers per hour, 9/15, p.153
Steelworkers, highest paid, 9/29, p.49

Warehouse:
Clark Equipment IBM and teletype equipment, 9/8, p.51

Warehousing & Distribution:
Distributors being squeezed, battle recession, 9/15, p.108
Mills cut jobber discounts, pipe and plates, 10/13, p.135
Secondary steel demand, 9/15, p.229
Service centers buster, 7/21, p.151
Service center discounts for volume buyers, 9/8, p.127

Warm Heading:
Warm heading tackles tough metals, 7/21, p.114

Wastes:
Biological treatment, Dow Chemical, TO, 9/8, p.97
Pickle liquor disposal made practical, A. O. Smith, 7/28, p.76

Water:
1980 industry needs: Bureau of Mines conservation program, 9-29, p.58
Alloy C freshens water, TO, s 4, p.95
Water-cooled electrodes, 11-10, p.121
Water plots air flow patterns in precipitators, 11-10, p.124

Water Heaters:
Wire mesh electrical heating element for airliners, 9-22, p.85

Waterways:
Inland waterway traffic: Metal-working barges ahead, 11-17, p.61
Scrapmen ask removal of freight fee, 12-1, p.132

Watervliet Arsenal:
Buys equipment, B, 7-28, p.61

Welding (Arc):
Automaker welds at 150 ipm, 12-1, p.76
CO_2 welder makes casting repair easier, 11-17, p.110
Cadillac adopts dual shield, flux-CO_2 combination, 12-15, p.143
Converto cuts welds aluminum trailer subframes on same equipment, 11-10, p.118
Nickel alloy electrodes for dissimilar welding carbon steel to cast iron, 7-14, p.118
Plasma arc tames tough metals, 12-22, p.78
Welder trims furnace cost (McGraw Edison uses Unionarc), 9-29, p.100

Welding (General):
Stainless tested for zinc particles, cause of cracking, 9-29, p.102

Welding (Induction):
Buttwelder (pipe) leaves no flash, 9-22, p.84

Welding (Resistance):
Cost stress relieves weld on storage tank (on-the-spot resistance heating), 9-1, p.66
Field welding (portable unit) for public utility pipe, s 18, p.115
Studwelding stainless, 7-7, p.70
Titanium fabrication advanced by spotwelding aircraft frames, 11-24, p.117
Welder ring cuts costs, flash buttwelder, 12-29, p.68

Welding Research Council:
Elects, B, 11-24, p.96

Weldments:
Abrasive cleaning welding equipment, 7-7, p.66
New alloy weldable, Carpenter 104, 12-1, p.74
Welded brass for grinders are stronger, 10-20, p.271

West Coast:
See Area Development

Wholesale Price Index:
Use in escalation clauses, 7-28, p.38

Wind Tunnel:
Device freezes air to produce vacuum, 11-17, p.123

Wire:
Anodized electrical wire, 9-22, p.31
Crimped wire cloth woven by integrated machines, 12-29, p.58
Package aids identification (thermocouple wire), 9-8, p.110
Pails handle wire instead of spools in production of fan motors, 11-3, p.82
Patenting change makes high carbon steel wire better at flexibility, 7-14, p.120
Spring wire gets a lift (cross extrusion), 12-1, p.70
Wire brush for deburring, bonding material-plastic, 10-6, p.86
Wire mesh around water heater-electrical elements, 9-22, p.85

Wire Mills:
Four producers file with Tariff Comm. claiming import damage, 12-1, p.38

Wire Products:
Steelmakers meet threat of imports, 10-27, p.35

Wire Rods:
AS&W production mark, bellwether steel product, 11-3, p.15

Work Sampling:
Getting more from men and machines, 10-6, p.44

Work Simplification:
Work Simplification Conference (Mogensen-dir.): To boost productivity, consult your employees, 9-29, p.65

Work Standards:
Baker Perkins: Job check cuts costs, 9-22, p.47

Wrenches:
Wrench handles billets, 9-29, p.105

Wright Air Development Center:
Alloying of solids: Micrometeorite bombardment, 10-6, p.77

X Y Z

X-Ray:
Autometer x-ray checks alloy, 11-24, p.114
Zinc in mine wastes x-rayed, TO, 9-29, p.55

Zinc:
Zinc foil deposit electrolytically, TO, 9-22, p.79

Zirconium:
Industry report, 9-29, p.60
Mallory-Sharon cuts prices, 9-15, p.232
Thin rolled zirconium, s 11, p.71

COMPANY INDEX

A

Abrading Systems Co.:
Lap base water cooled. IE, 9-1, p.81

Abrado Finish Corp.:
Finishing machine. IE, 12-1, p.95

Abrasive Machinery Corp.:
Replaces worn abrasive. IE, 7-14, p.140

ACF Industries Inc.:
Hot-cold forming, Berwick plant. 11-3, p.72

Acme Road Machinery Co.:
Seeding plastic locks in parts. 12-22, p.70

Acme Steel Co.:
Cupolas provide hot metal for oxygen converter plant, Riverdale, Ill., 9-29, p.94
Oxygen generating plant. 7-28, p.60
Salary cut cancelled. 9-15, p.107
Strippers and attach., 9-15, p.212; 10-20, p.282; 10-13, p.126

Acrolite Products Inc.:
Gear grease-pushbutton conv. IE, 12-15, p.158

Adamas Carbide Corp.:
Machine service unit gets rid of costly downtime. 12-15, p.132

Advance Industries Inc.:
Buys Electrolizing. B, 8-18, p.78

Aerojet-General Corp.:
Cargo sub freighters. 8-25, p.42

Aeronca Mfg. Corp.:
Buying Pastushin. B, 9-22, p.66

Affiliated Manufacturers Inc.:
Micro-Feeder. IE, 7-21, p.135

Air Reduction Sales Co.:
Aircomatic welder. IE, 9-15, p.218
Drilling machine cuts costs on gas regulators. 11-17, p.108
Oxygen facilities, 9-29, p.82; 10-6, p.67
Oxygen-nitrogen plant, Kans., 9-1, p.55

Airline Welding & Engineering:
Accurate welding truck. IE, 10-13, p.128
Welding positioner. 9-22, p.102

Ajax Electrothermic Corp.:
Converter powers furnaces. IE, 8-18, p.118

Alan Wood Steel Co.:
Pinpoint humidity control eliminates need of painting stock right after forming. 8-25, p.98
Sells facilities to Wheeling. 8-18, p.40

Albi Mfg. Co.:
Ingot mold coat. 7-7, p.72

Alcar Instruments Inc.:
Ultrasonic cleaner. IE, 11-17, p.133

Al-Con Chemical Co.:
Protects electrical units. IE, 12-15, p.158

Algoma Steel Corp.:
Oxygen steelmaking plant. 12-15, p.113
Structural price upped. 11-3, p.136

Allan Hershell Co.:
Buys U. S. Brownie. B, 9-8, p.78

Allegheny Ludlum Steel Corp.:
Enlarges research lab. B, 8-4, p.84
Redesigned box, cost saving. 7-14, p.72
Special metal prices rise. 8-25, p.119

Allen Mfg. Co.:
Bloomfield plant. 11-24, p.85

Alliance Machine Co.:
Ladle crane for U. S. Steel. 7-21, p.102

Allied Engineering & Production Corp.:
Press-hydraulic. IE, 8-11, p.80

Allis Co., Louis:
Adjustable speed drive. IE, 12-29, p.72
Ind. heat exchanger motor. IE, 11-24, p.124
Vertical motor climatizer. IE, 7-21, p.136

Allis-Chalmers Mfg. Co.:
Buys S. Morgan Smith. 12-22, p.61
Foundromatic shakeout to Erie Forge. 9-8, p.76
Labor pact with IUE, 9-1, p.21
Numerical controls for electrical renewal part order processing. 12-8, p.74
Resin insulates stators. IE, 10-27, p.104
Technicians not engineers. 10-27, p.40

All-State Welding Alloys Co.:
Canadian subsidiary. 12-8, p.95

Alph Press & Machine Inc.:
Die tryout press. IE, 9-15, p.200

Alphil Spot Welder Mfg. Corp.:
Air-operated buttwelder. IE, 8-25, p.109

Alpine Electronic Components Corp.:
Organized. B, 10-13, p.77

Aluminum Co. of America:
Aluminum tin-auto radiator, 9-29, p.149
Facility for wide roller-coated sheets. 11-3, p.66
Magnet wire new. 10-6, p.117
Plate stretcher, p.c., 7-14, p.86
Pot-line in operation, Missouri, 10-6, p.67
Profits, 1st half '58 vs. '57, 7-28, p.27
Research expenditures. 11-24, p.52

Aluminium Ltd.:
Builds power plant Quebec-Labrador. 9-29, p.57

Alves-Ferguson Co.:
Caterpillar drive for overhead conveyors. 10-6, p.94
Drive for overhead conveyors. IE, 11-25, p.92

American Air Filter Co.:
Air-decontamination system. 11-17, p.126

American Aluminum Structures Inc.:
Formed. B, 12-8, p.98

American Bosch Arma Corp.:
Machining weld clamping rings. Time trimmed 22%. 8-18, p.112

American Brass Co.:
Opens $18-million mill. Calif. 7-14, p.89
Semicontinuous casting of copper-brass extrusion billets. 12-15, p.146

American Can Co.:
Coil processing plant, Hillside, N. J., 11-17, p.85
Consolidates subsidiaries. 12-29, p.42
Franco-Italian contract. 10-20, p.120

American Chain & Cable Co.:
Shotblast products. 11-10, p.123
Testing units unveiled. 9-29, p.57

American Cold Galvanizing Co.:
Poly-Zinc coat. IE, 7-21, p.139

American Duralite Corp.:
Merger of firms. B, 10-20, p.154

American Forge & Mfg. Co.:
Tongs aid lifting. IE, 11-3, p.92

American Forging & Socket Co.:
Expands, new officers. 12-15, p.116

American Gas Furnace Co.:
Reciprocating furnaces. IE, 11-3, p.89

American Machine & Foundry Co.:
Forms two divisions, Atlantic. 10-13, p.77
Drafting simplified, 8 rules. 11-3, p.75

American Metal Products Co.:
Forms research div. B, 11-10, p.108
Non-lube fabric bearing. 12-22, p.48

American Meter Co.:
Buys Buffalo Meter. B, 10-27, p.68

American Motors Corp.:
'59 production schedules, 8-18, p.39
'59 sales aim, 9-15, p.97
Keynoting losses, plant for Spain, 9-1, p.21
Pays off loans, shows profit, 7-28, p.48
Rambler contest, pr., 8-11, p.42
Rambler, Rebel and Studebaker Lark compared. 10-20, p.110
Rambler rises, mfg. expenditures, 12-15, p.76
Small car market predicted, 9-22, p.34
Stock purchase plan for employees, 7-7, p.40
SUB for plant rejected by MESC, 10-6, p.32
UAW accept pact, 9-1, p.21

American Nickeloid Co.:
Offers brass-steel grades. 10-6, p.114

American Pulley Co.:
Raises double belt life. IE, 12-29, p.74

American Pullmax Co. Inc.:
Cutter. IE, 9-15, p.214
Shearing machine, 13 gage. IE, 10-20, p.282
Unit forms and shears. IE, 11-10, p.148

American Radiator & Standard Sanitary Corp.:
Raises price of plumbing fixtures, 10-6, p.112
Youngstown kitchens move to Warren, 7-14, p.91

American Silver Co.:
Forms roll-rolling unit, 8-4, p.83
Rolls ultrathin zirconium, 8-11, p.71
Silver-clad strip. IE, 9-29, p.110

American Smelting & Refining Co.:
Shut down block of zinc retorts at Amarillo, 7-7, p.30

American Steel Foundries:
Hot forging press. IE, 12-22, p.84

Ames Co., B. C.:
Air gage. IE, 12-22, p.84

Anaconda Co.:
Engineering unit officers, 10-6, p.68

Argonaut Motor Car Corp.:
Argonaut makes its debut, pic., 11-3, p.53; 9-15, p.98

Arkansas Louisiana Gas Co.:
Diversification profitable. 12-22, p.41

Arkos Mfg. Co.:
Formed. B, 9-29, p.82

Armco Drainage & Metal Products Inc.:
How much is $1 billion?, 9-15, p.98

Armco Steel Corp.:
Aluminized steel sheet market, 9-22, p.113
Holston heat treating facilities for special alloys, 10-27, p.63
Linde builds oxygen plant, 10-6, p.67
Sintering plant, 9-15, p.105
Testing zinc particles on stainless sheets, cause of weld cracks, 9-29, p.102
Waste-water clarification equipment, 7-14, p.62

Aro Equipment Co.:
Buys Firewel. B, 12-29, p.42

Arrow Engineering Co. Inc.:
Contour mill. IE, 10-20, p.288

Arted Co.:
Arrust coating. IE, 11-17, p.134

Arter Grinder Co.:
Weldments for grinder bases, 10-20, p.270

Askania Regulator Co.:
Changes name. B, 9-1, p.55

Associated Spring Corp.:
Market research, E. C. Morrell, 12-29, p.34
Springback Formula?, 7-7, p.39
Trademarks express corporate image. 12-8, p.95

Atlas Copco Eastern:
Compressor. IE, 12-22, p.84

Atlas Industrial Corp.:
Truck loader. IE, 11-3, p.92

Atronic Products Inc.:
Cation selector. IE, 11-10, p.146

August Thyssen-Huette A. G.:
Argentine order for rolled steel, 11-17, p.52

Automatic Feed Co.:
Measuring device for coil feed. IE, 11-17, p.144

Automatic Tool Inc.:
Auto-positioner. IE, 10-6, p.94

Automatic Transportation Co.:
Gas engine on fork trucks. IE, 10-27, p.103
3-D truck, auxiliary platform. IE, 7-7, p.86
Sky-Hi-Lift. IE, 9-15, p.196
Tri-plate coils truck mover. IE, 9-15, p.191

Automation Devices Inc.:
Orientator. IE, 11-3, p.86
Pinch-pen roll orientator. IE, 11-10, p.148

Avco Mfg. Corp.:
Nashville div., 12-22, p.60

B

B & T Machinery Co.:
Trim press. IE, 10-20, p.276

Babcock & Wilcox Co.:
Boiler design. IE, 7-21, p.138

Bailey Meter Co.:
Consumer-style selling. 9-8, p.55

Baird-Atomic Inc.:
Spectrometer readout for metals analysis, 7-21, p.122

Baker Bros. Inc.:
Buys Detroit Screwmatic, marketed as Baker automatic bar machine. 9-1, p.112
Machine features spindle head interchangeability. IE, 9-29, p.107
New series of vertical and horizontal drilling machines using building block versatility. 9-22, p.95

Baker Perkins Inc.:
Job check cuts costs, 9-22, p.47
Sketches cut work time. 12-1, p.76

Baldor Electric Co.:
Zinc diecastings for clamps. 7-14, p.136

Baldwin-Lima-Hamilton Corp.:
Compact press, IE, 9/8, p.118
Stamping press, IE, 11/17, p.138

Bal-Tate Furnace Co.:
Molten glass used to heat forging billets, S/11, p.74

Barde Steel Co.:
Reorganized, B, 7/7, p.11

Barnes Corp., John S.:
Drive indexes machines, IE, 11/3, p.92

Barrett-Cravens Co.:
Pallet for narrow aisles, IE, 10/6, p.100
Tractors improved, IE, 9/15, p.204

Bart Mfg. Corp.:
Buys Kent Corp., 7/7, p.63

Basic Inc.:
Tar bonds oxygen vessel bricks; J. P. Holt, 7/7, p.74

Batchelder Engineering Co.:
Drill clamps, IE, 8/25, p.108
Versatile drill, IE, 12/22, p.82

Bay City Foundry Co.:
Changes hands, B, 7/7, p.62

Bee Chemical Co.:
Wrinkle finish, IE, 8/4, p.112

Beckman Instruments Inc.:
Helipot 3-dy., S/18, p.51

Behr Manning Corp.:
Show buys off in sales contest; abrasive machinery, 7/7, p.45
Sling shows roll changes on grinder, 12/29, p. 67

Belke Mfg. Co.:
In-tank filter, IE, 11/24, p.127

Bellows Co.:
Consider low-cost automation; J. L. Fisher Jr., 9/22, p.98

Bel-Ray Co. Inc.:
Molylube, IE, 10/6, p.92

Benchmaster Mfg. Co.:
Cut cradle, IE, 7/28, p.85
Press-brake geared, IE, 10/6, p.102
Press-deep throat, IE, 7/21, p.138
Punch press, IE, 9/8, p.118
Stamping punch press, IE, 9/8, p.118

Bendix Aviation Corp.:
Eclipse-Pioneer Div.; Cost crisis entry, 10/27, p.92
Expands filter plant, B, 7/7, p.63
Industrial Controls Section, S/4, p.87
Numerical control for machines, S/18, p.120
Radar signal for car safety, 7/14, p.76
Zenith Carburetor: New line has a three-year payoff, cost crisis article, S/18, p.96

Benson-Lehner Corp.:
Decimal counter, IE, 11/10, p.144

Bernard Welding Equipment Co.:
Water-cooled electrodes, 10/11, p.121

Beryllium Corp.:
Developing ductile beryllium, 11/10, p.121
Fabrication plant, Hazleton, Pa., S/11, p.55
Vacuum melting furnace, pic., 9/8, p.50

Bethlehem Pacific Coast Steel Corp.:
Blooming mill, Seattle, 11/3, p.66

Bethlehem Steel Corp.:
Annual earnings, 1st half, S/25, p.19

Bethlehem Steel Co.:
Homer sees upturn, 11/10, p.170
Reactor forgings, materials, 12/22, p.72

Bickley Furnaces Inc.:
Organized, B, 10/13, p.80

Big Joe Mfg. Co.:
Telescopic lift truck, IE, 8/25, p.110

Bin-Dicator Co.:
Roto-Guard signals motion, 9/15, p.206

Binks Mfg. Co.:
Paint pumps, IE, 9/22, p.107
Electrostatic spray units, IE, 7/28, p.85

Birdsboro Steel Foundry & Machine Co.:
Converts mill, B, 12/1, p.66
Shear cuts on upswing, 7/14, p.136

Bishop & Co., J.:
Broadens range of 17-7 PH tubing, S/25, p.94
Package aids identification of thermocouple wire, 9/8, p.110

Black & Decker Mfg. Co.:
Sander eliminates dust, IE, 9/22, p.104
Vacuum cleaner recovers material, IE, 11/17, p.134

Blackstone Corp.:
Ultrasonic cleaning unit, IE, 9/15, p.220

Blanchard Machine Co.:
Grinder-three spindle, IE, 12/15, p.168

Blaw-Knox Co.:
Broadens lines; distributors, 9/1, p.87
Foundry shutdown, Buffalo, 7/14, p.89
Slabbing mills, 11/17, p.85
Steel ladle pours into vacuum chamber; pic., 9/1, p.73

Bliss Co., E. W.:
Copper strip from powdered metal, 9/8, p.114
Press for wide sheets, IE, 8/25, p.108

Bliss Steel Products Corp.:
Cost crisis: Handling system trims sash cost, 9/22, p.82

Blue M Electric Co.:
Radi-O-Glow furnace, IE, 8/25, p.110
Recirculating ovens, IE, 11/17, p.138

Boeing Aircraft Co.:
Orrin Phagens says: You can afford to machine numerical control equipment, 12/8, p.108
Cost cutting: New methods meet the challenge of honeycombs, 9/1, p.60
Hot forming titanium strip (Yoder roll), 11/17, p.114
Military contracts, 9/22, p.31

Booz, Allen & Hamilton:
New products: Avenue for profit growth cycle charts, 11/17, p.102

Borg-Warner Corp.:
Choosing carbides, 7/7, p.84
Hoist, IE, 11/24, p.127; hoist boom, 9/15, p.218
Marvel-Schebler plant converted to air conditioning, 11/3, p.67
Pesco moves warehousing to Wooster, 7/21, p.104
Self-contained power unit, IE, 10/20, p.284
Skyscraper-curtain walls, dedicated, 9/8, p.73

Bostitch:
Stapler, IE, 7/7, p.87

Boston Gear Works:
Reduction helical gearing, IE, 8/18, p.118

Boyar-Schultz Corp.:
Small firm can act faster, 10/20, p.136

Braeburn Alloy Steel Co.:
Installs bar turner, 10/6, p.67

Branson Ultrasonic Corp.:
Sonogen generator, IE, 12/1, p.92

Bridgeport Brass Co.:
Cost crisis entry: Hunter Douglas Alum.
Forming molybdenum tubing, S/11, p.82
Impact extrusion takes on hard alloys, 9/1, p.64

Bridgeport Rolling Mills Co.:
Melting facilities, 11/10, p.108

Briggs & Stratton Co.:
Idea for battery charging for electric trucks, 9/8, p.103

Brown & Sharpe Mfg. Co.:
Circuitpak hydraulic power, IE, 9/29, p.110
Surface grinder built to user needs, IE, 12/29, p.71

Brown-Brockmeyer Co.:
Buys National Gear, 9/22, p.66

Brush Beryllium Co.:
Expands, B, 9/15, p.131
Extrusions rolling mill, Elmore, O., 12/15, p.116

Bryant Grinder Co.:
Division renamed, B, 8/11, p.55

Bucyrus-Erie Co.:
Winkle rights, drill, 12/22, p.60

Budd Co.:
Gammiscan, IE, 11/10, p.118
Radiography unit, IE, 7/28, p.81

Buell Engineering Co. Inc.:
Classifier separates material, IE, 11/3, p.99
Water plots air flow in electric precipitators and vanes, 11/10, p.124
Water cure-compressed air and ventilation ducting, TO, 9/29, p.85

Buhr Machine Tool Co.:
Machining detective for broken tools, TO, 7/14, p.111
Special machine handles 36 varieties, S/18, p.102

Burg Tool & Mfg. Co.:
Radial turret drill, IE, 7/21, p.142
Tape controls, IE, 9/1, p.80

Buschman Co., E. W.:
Conveyor roller easily removed, IE, 7/14, p.110

C

Calumet & Hecla Inc.:
Wolverine court ruling on non-strikers right to enter plants, 9/8, p.47

Cambridge Wire Cloth Co.:
Integrated machines weave crimped wire, 12/29, p.58

Carborundum Co.:
Boron carbide plant, B, 9/8, p.76
Expands in Keasbey refractories plant, 11/3, p.66
Plant expansion, S/11, p.54

Carpenter Steel Co.:
Alloy 404 is weldable, 12/1, p.75

Carver Foundry Inc.:
Sold, B, 8/4, p.83

Case International S. A., J. I.:
Buys Societe Francaise, B, 8/4, p.89

Cecо Steel Products Co.:
Builds bar mill, B, 9/15, p.139

Centerline Engineering Co.:
Floating Plate for heavy work, IE, 10/27, p.103

Cerro de Pasco Corp.:
Buys Consolidated Coppermines, 11/24, p.96

Cessna Aircraft Co.:
Special machine handles 36 varieties, S/18, p.102

Chain Belt Co.:
Conversion to electric immersion heaters in salt bath, 10/6, p.83
Long term planning, 11/17, p.104

Chance Vought Aircraft Inc.:
Getting more from high strength steel, 11/17, p.128
Patent for die tests for surface elongation, 9/8, p.101
Titanium fabrication advanced by spotwelding, 11/24, p.117

Chemclean Products Corp.:
Acid removes welding stain, IE, 10/27, p.104

Chemetron Corp.:
Buying Allbright-Nell, 7/7, p.63
Buys Cardox, B, 12/29, p.42
Oxygen in electric furnace, 11/24, p.108

Chesapeake & Ohio:
Hopper car for steel mills, 9/8, p.116

Chemical Contour Corp.:
Etch castings license, 11/3, p.66

Chicago Bridge & Iron Co.:
Expands, B, 9/15, p.131
Water-cooled electrode, 11/10, p.121

Chicago Screw Co.:
Extra-work day, chart by drive contribution, 11/17, p.52

Chisholm-Moore Hoist:
See Columbus-McKinnon

Chromalloy Corp.:
Buys Propellex, 9/22, p.66
Explosive forming, 12/8, p.58 and p.128
Iochrome, high purity metal, 12/8, p.128

Chrysler Corp.:
Amidex bearings, IE, 12/22, p.84
Dodge strike, 12/15, p.76
Imperial improvements, 10/6, p.54
Simca purchased from Ford, S/11, p.42
Simca, small car, S/18, p.59
Simca model-Aronde Elysee pic., 10/6, p.45
Simca dealers, 12/15, p.100

Cincinnati Fan & Ventilator Co.:
Dust collector model, IE, 10/6, p.94

Cincinnati Milling Machine Co.:
Contour mill 3-D control, IE, 10/20, p.280

Cincinnati Sub-Zero Products:
Low temp. unit cools stainless, IE, 10/6, p.94

Clark Controller Co.:
Adds electronic devices, B, 11/17, p.85

Clark Equipment Co.:
Battery truck, IE, 9/29, p.107
Powerworker grip tractor, IE, 8/11, p.88
Truck handles dies, IE, 10/6, p.102
Used lift truck branch, 9/29, p.56

Clarkson Laboratories Inc.:
Aluminum cleaner, IE, 8/4, p.112

Cleaver-Brooks Co.:
Builds boiler plant, B, 9/8, p.76
Buys Springfield Boiler, B, 11/24, p.96

Cleveland Crane & Engineering Co.:
Press brakes hydraulic, IE, 7/7, p.85

Cleveland Instrument Co.:
Electronic gage, IE, 11/24, p.121
Measures roughness, 10/27, p.103
Moves to new building, 10/6, p.67

Cleveland Pneumatic Industries Inc.:
Air feed attachments, IE, 10/6, p.92
Air stock feed, IE, 12/29, p.73
Buys Chas. S. Gordon Co., S/4, p.89

Cleveland Punch & Shear Works Co.:
Large press, IE, 12/8, p.138

Cleveland Vibrator Co.:
Vibrator tester, S/4, p.102

Clow & Sons Inc., James B.:
Iron pipe plant, B, 11/17, p.85

Cogsdill Twist Drill Co. Inc.:
Sells drillmaking facilities to Sheffield subsidiary, 12/1, p.66

Colorado Fuel & Iron Corp.:
Hinged wrench handles billets, 9/29, p.105
Wickwire move to Palmer, Mass., 9/29, p.82

Colson Corp.:
Lift truck maneuverable, IE, 7/7, p.88

Columbus Coated Fabrics Corp.:
Forms metal laminates div., B, 11/17, p.88

Code: B—*Briefs;* IE—*Industrial Equipment;* TO—*Technical Outlook*

Columbus-McKinnon Chain Corp.:
Powdered metals improve hoists; Chisholm-Moore Hoist Div., 9/29, p.88

Commander Mfg. Co.:
Multi-Drill, IE, 9/1, p.80; 12/29, p.72

Commonwealth Engineering Co.:
Cutting compound, IE, 12/8, p.139

Computer Equipment Corp.:
New name, B, 9/8, p.76

Conforming Matrix Corp.:
Paint sprayer, IE, 12/15, p.156; 12/29, p.72

Consolidated Electrodynamics Corp.:
Glow discharge aids vacuum coating, IE, 9/1, p.80
Leak detector, IE, 8/25, p.108
Units renamed, 12/22, p.60

Consolidated Iron-Steel Mfg. Co.:
Buys Ohio Foundry plant, 8/4, p.83

Continental Can Co.:
Aluminum cans gain, 7/28, p.36
Canmaking process new, 8/25, p.41
Merges subsidiaries, B, 12/22, p.60

Continental Coatings Corp.:
Spray-on ceramics; flame process, 10/20, p.188

Continental Machine Co.:
Cutoff feeds pipe, IE, 7/28, p.85

Continental Steel Corp.:
Profits, 1st half '58 vs '57, 7/28, p.27

Controls Co. of America:
Buys Redmond, 7/7, p.63; name change, 9/15, p.136

Convair: See General Dynamics

Converto Mfg. Co.:
Cuts and welds trailer subframes on same equipment, 11/10, p.118

Cooper Alloy Corp.:
Shell cores save machining, 9/8, p.102

Cooper-Bessemer Corp.:
Buys Creole Eng., 9/8, p.78

Copperweld Steel Co.:
Buys mill facilities, 10/6, p.68
Expands to make Alumoweld wire and strand, 8/18, p.51
Ohio Seamless: Breakdown (man-per-hour) in fringe benefits, 7/21, p.65

Corning Glass Works:
Cercor ceramics, honeycomb structures for high temps, 10/6, p.86

Crescent Tool & Machine Co. Inc.:
Gun drilling unit, IE, 9/8, p.117

Crouse-Hinds Instrument Co. Inc.:
New name, 8/11, p.54

Crown Controls Co. Inc.:
Lift truck-battery, IE, 8/11, p.87
Portable truck lift, IE, 9/8, p.118

Crucible Steel Co. of America:
Grinder control system, Spaulding Wks., 12/8, p.127
New heat-treatable titanium-base alloys for space age, 7/14, p.116
Stainless price up, 12/22, p.93
Technology dept., 9/29, p.61

Cuban American Nickel Co.:
Name change, B, 12/15, p.113

Cummins Engine Co.:
Inventory control and production scheduling, 8/4, p.65

Curry Air Shear Corp.:
Shears cut fishtails from sheet, IE, 8/11, p.88

Curtiss-Wright Corp.:
Builds Mercedes-Benz diesels, 7/28, p.48
Buys Wooldridge Div., 7/21, p.102
Cross extrusion of spring wire, 12/1, p.70
Precision gear forging, 9/8, p.100
Rotary forging use predicted, 11/10, p.122

Cutler-Hammer Inc.:
Packaged drives static power, IE, 8/11, p.90

D

Dahlstrom Machine Works Inc.:
Changes hands, B, 10/27, p.63

Dalmo Victor Co.:
Magnesium dip brazed, 8/4, p.101

Dana Corp.:
Transmission semiautomatic, 12/22, p.18

Danly Machine Specialties Inc.:
Air friction clutch, IE, 11/3, p.99

Datagraphic Systems Inc.:
Formed by Douglas and Aniline, 12/22, p.60

Dave Steel Corp.:
New name, 7/28, p.60

Daystrom Inc.:
Buys Industrial Gauges, 9/15, p.136

Dayton Rogers Mfg. Co.:
Trims drawn shells, IE, 11/24, p.128
Stamping sprockets reduces costs, 9/1, p.63

Deere & Co.:
Merged with subsidiaries, 8/18, p.72

Defiance Machine & Tool Co.:
Press marks stainless, IE, 8/18, p.120

Deming Co.:
Buys Seren Machine Products, 10/27, p.63

Dempster Bros. Inc.:
Detachable containers, IE, 10/20, p.286

Derbyshire Inc., F. W.:
Precision drill press, IE, 12/15, p.154

Detrex Chemical Industries Inc.:
Econo-Sonic degreaser, IE, 11/3, p.92

Detroit Testing Machine Co.:
Flanges tested, IE, 7/14, p.142

DeVilbiss Co.:
Compressor units, IE, 9/29, p.110
Forms subsidiary, B, 8/4, p.83

Diamond Alkali Co.:
Research center plans, B, 11/24, p.88

Die & Automation Inc.:
Extractor, press-hand, IE, 10/27, p.103

Diebold Inc.:
Buys Herring-Hall, B, 9/1, p.55

Digitron Inc.:
Name change, 9/8, p.76

Diversey Corp.:
Grants etching license, 11/3, p.66

Divine Bros. Co.:
Abrasive belt attach., IE, 12/15, p.158
Conveyor indexes parts, IE, 10/6, p.100
Indexing circuit conveyor, IE, 11/3, p.94
Rotary conveyor, IE, 11/10, p.141

Dixon Automatic Tool Inc.:
Auto-Torque driver, IE, 12/15, p.155

Dixon Crucible Co., Joseph:
Lube for severe load, IE, 10/27, p.104

DoAll Co.:
Bandsaws, IE, 8/25, p.108
Inspection unit for castings, IE, 11/17, p.133
Precision surface grinder, IE, 10/13, p.128

Dominion Foundries & Steel Ltd.:
Closed-circuit communications, 12/15, p.136
Expands mills, B, 8/25, p.75

Douglas Aircraft Co.:
Forms Datagraphic, 12/22, p.60
Hot lines keep paint fluid, 7/21, p.117

Douglas & Lomason Co.:
Union agrees to wage cut, 7/7, p.29

Dover Corp.:
Merges Shepard Elevator, 8/25, p.76
Mergers with Pritchard, 11/10, p.113

Dow Chemical Co.:
Aluminum extrusions horizontally heat treated, 9/29, p.104
Anodize-clear coat for magnesium, 11/24, p.117
Boiling coolant, TO, 9/22, p.79
Submumber maintenance report system, 11/24, p.67

Dresser Industries Inc.:
Welded rings flash buttwelded, cut costs, 12/29, p.68

Dudek & Bock Spring Mfg. Co.:
Buys Advance Spring, B, 8/11, p.55

Dumore Co.:
Drill-tap device, IE, 9/8, p.118

Du Pont de Nemours & Co., Inc., E. I.:
Fibrous material insulates, 12/15, p.134
GM case, Justice Dept. asks curb, 10/6, p.51
GM stock plan, 9/22, p.52
Trichlorethylene paint system, 11/10, p.132

Durabilt Co.:
Metal treatment, IE, 11/24, p.124

Duraloy Co.:
High nickel casting alloy, 12/29, p.70

Durant Tool Co.:
Roll feed accurate, IE, 8/11, p.88

Dwight-Lloyd Div.: See McDowell Co.

Dynapar Corp.:
Transistorized counter, IE, 10/27, p.101

Dyson Corp.:
Acquires stock in Waukesha Motor, B, 11/17, p.88

E

Eaton Mfg. Co.:
Acquiring Fuller Mfg., B, 7/7, p.63
Dew point monitoring pays off: A. R. Keefe and M. R. Koehn, 10/13, p.100
Labor settlements, 11/17, p.51

Eclipse Fuel Engineering Co.:
Buys Lookout Boiler, B, 11/3, p.67

Eclipse Pioneer: See Bendix Aviation

Edgcomb Steel Co.:
Metal service center, B, 10/13, p.82

Edlund Machinery Co.:
Layout, IE, 11/24, p.124

Edwards & Associates, Paul:
Productivity: How to measure it . . . how to boost it, 8/25, p.52

Eldorado Electronics:
Gage for steel sheets, 10/6, p.91

Electric Steel Foundry Co.:
Cost crisis: Six point attack aimed at inspection equipment, 12/8, p.112

Electric Storage Battery Co.:
Chargers for truck batteries, IE, 9/15, p.218
Synthetic hydraulic fluid fireproof, 8/11, p.80

Electrofilm Inc.:
Tape for electrical heating elements, wire mesh, 9/22, p.85

Electro Metallurgical Co.:
Analytical lab, B, 7/14, p.92

Electronic Controls Corp.:
Retains Clark line, 12/8, p.98

Elwell-Parker Electric Co.:
Dump attachment, IE, 8/4, p.112
Titan trucks, IE, 11/17, p.141
Truck handles heavy dies, IE, 9/1, p.79

Embassy Steel Products Inc.:
Forms div., B, 8/25, p.76

Empire-Reeves Div.: See Universal-Cyclops

Energy Mfg. Co.:
Radial arm drill press, IE, 9/22, p.105

Engleberg Inc.:
Belt grinder, multiple heads, IE, 7/28, p.85

Enthone Inc.:
Conco merged, 12/22, p.60
Emulsion cleaner, cold, IE, 7/21, p.140
Enth-Acid, IE, 10/6, p.100

Erie Forge & Steel Corp.:
Buys foundromatic shakeout, 9/8, p.76
Oxygen supply plant, 7/28, p.60
Vacuum changer installed, B, 10/20, p.153

Erie Foundry Co.:
Automation triples forging, 9/29, p.90
Finding customer's wants, 7/14, p.105

Eriez Mfg. Co.:
Magnetic roll for press feeder, 7/14, p.118
Vibratory feeder, IE, 9/8, p.119

Ettco Tool & Machine Co. Inc.:
Knuckle-Head drill, six spindles, IE, 8/18, p.120

Ex-Cell-O Corp.:
Numeri-Trol profiler, IE, 8/25, p.107
Precision bore for small parts, IE, 9/1, p.81

Expert Die & Tool Co.:
Welds untrimmed edges, IE, 11/3, p.98

F

Fairchild Engine & Airplane Corp.:
Aluminum bridge test structure, 9/1, p.31

Falk Corp.:
Drive shaft mounted, IE, 12/15, p.168

Fansteel Metallurgical Corp.:
Consolidates Tantalum Defense, 12/22, p.61
Cuts capacitator prices, 9/8, p.154

Farrel-Birmingham Co. Inc.:
Scrap shear, IE, 7/14, p.137

Farrell Lines Inc.:
Seeks construction subsidy for Cargoliners, 10/13, p.42

Farrell Mfg. Co.:
Buys Indiana Oil Equipment, 7/21, p.107

Fasco Industries Inc.:
Pails cut handling costs, 11/3, p.82

Federal Machine & Welder Co.:
Flashwelder, IE, 8/4, p.115
Titanium seam welder, IE, 8/18, p.118
Welder-general use, IE, 12/22, p.85

Federal Pacific Electric Co.:
Buys Cemco, 11/24, p.96
Cranes move presses into position where . . . Machines are taken to the work, 7/21, p.76

Federal Products Corp.:
Electronic test indicator, IE, 12/8, p.136
Seminars on gage limits, 10/27, p.98

Feedall Inc.:
Feeder for small parts, IE, 12/22, p.82

Fenway Machine Co.:
Nibbler cuts corrugated metals, IE, 9/15, p.210

Ferguson Machine Corp. of Indiana:
Assembly table, IE, 11/17, p.134

Fiat Mazzacchera Co.:
Licenses glass bath, S/11, p.74

Fischer Special Mfg. Co.:
Market survey, S/18, p.85

Flour City Ornamental Iron Co.:
Saws cut bronze extrusions, 11/3, p.88

Ford Motor Co.:
1959 styling radical changes avoided, 10/13, p.63
Alloys, high strength, 10/20, p.139
Argentine plant proposed, S/25, p.42
Building block report, Daum, 10/27, p.98
Dream car (pic) is contest prize, 12/29, p.45
Edsel's front end styling, pic., 7/14, p.76
Galaxie series, 12/15, p.100
Gun drilling, Lima plant, TO, 9/29, p.85
Import cars, English - German, 12/15, p.99
Lima plant: Cold extrusion saves metal making piston pins, 11/17, p.112
Lending reinforcement blank in die area, control dial, 9/29, p.89
Management realignment, S/18, p.60
Nance resigns, 9/15, p.118
Small car, production-cost outlook, S/25, p.62
Taunus price, German car, S/25, p.62
UAW settlement, 9/22, p.38

Frick Steel Co.:
Formed, B, 10/27, p.66

Fulton Steelcraft Co.:
New name, B, S/25, p.76

Futurmill Inc.:
Spindle converts planers, IE, 10/27, p.104

G

G. S. Equipment Co.:
Plating cylinder, IE, 10/6, p.92

Gabriel Co.:
Buys Talco Eng., B, 10/13, p.84; 9/15, p.136; 12/22, p.60

Gardner-Denver Co.:
Buys forge, trim press, S/18, p.74
Merges Mayhew, B, 11/10, p.114

Gas Appliance Service Inc.:
Unit ups coil output, IE, 12/22, p.84

Gas Atmospheres Inc.:
Hydrogen gas generator, IE, 9/22, p.104

Gate City Steel Inc.:
Buys Moffett Eng., B, 12/15, p.119

Gear Grinding Machine Co.:
Portrait of a superintendent, 11/3, p.51

General Aniline & Film Corp.:
Anseo Div.: Special machine jacks up quantity and quality, 11/24, p.104
Forms Datagraphic, B, 12/22, p.60

General Automation Corp.:
Joggit automatic brake, IE, 7/14, p.140

General Dynamics Corp.:
Convair cargo missile, 10/27, p.46
Convair: New Kirksite ups die life, 7/28, p.68
Convair: Vibration deburring for spar caps, 10/6, p.83
Dynapak, Convair's explosive forming, demonstrated at Metal Show, 11/3, p.41
Dynapak operations, 11/24, p.100 and p.112
Nuclear power plant award, merchant ship, 7/14, p.68

General Electric Co.:
AC motors for rolling mills, 9/15, p.191
Aircraft generator shafts of titanium solve machining problem, 9/29, p.92
Atomic power sales, 11/10, p.81
Closes Bloomfield plant, 12/29, p.42
Conveyor dispatched at switchboard, generator dept., 11/24, p.106
Election day off, 11/17, p.52
Furnace insulated by metal radiation shields, 12/15, p.149
Hot strip width meter on Morgan mill, 10/20, p.182
Hotpoint: Here's a way to measure executive ability, 12/15, p.86
Industrial diamonds, development, price, 11/10, p.85
Mill-control panels, IE, 9/1, p.81
Motor changes, IE, 10/13, p.124
Night light, questionnaire, 7/14, p.103
Packaged power for dc motor drives, IE, 9/29, p.108
Research center, Nela Park, 12/15, p.113
Research unit, 7/28, p.60
Savings plan pushed in lieu of SUB, 9/15, p.97; 10/27, p.37
TVX x-ray image tool for quality control, 9/22, p.42
Unit cools work in atmosphere furnace, IE, 11/3, p.97
Water-cooled rectifier, IE, 12/15, p.158
What's inside the coil? R. R. Davisson, 9/8, p.106
Where continuous annealing is going: N. B. Jones, 7/28, p.72

General Foundry & Mfg. Co.:
Cost crisis entry: Integrated cupola charging, 12/1, p.72

General Motors Corp.:
AC Spark Plug:
Missile guidance system, 12/29, p.42
Polished dies cut costs, 9/1, p.76
Buick LeSabre, pic., 9/15, p.118
Buick set for '59 model changeovers, 7/14, p.75
Cadillac Tank Plant: Continuous salt bath heat treating circuit layout, 10/6, p.72
Cadillac adopts dual shield, Cleveland Ordnance plant, 12/15, p.143
Cadillac introduces gas bag shocks, 10/27, p.50
Chevrolet's Cole forecasts, 10/6, p.54
Chevrolet corrects noises, 12/1, p.51
Donner, Gordon head GM, Curtice retires, 9/1, p.33
Du Pont case, Justice Dept. asks curb, 10/6, p.51
Electronics Instrumentation dept., 9/15, p.134
Fisher Body: Tips to suppliers on how to get business, 7/21, p.85
Import cars, 12/15, p.100
Instrument panel trends, 9/29, p.69
Monopoly attack opened by Kefauver, 11/17, p.64
Olds, 1959, pic., 9/29, p.70
Oldsmobile: Piston machining line, slippery steel conveyor belts, 7/14, p.124
Pontiac, Imperial debuts - '59, 10/6, p.53
Power steering - rotary valve, 10/13, p.64
Small-car engine for '59? 7/14, p.55
Small-car aluminum engine block, cost problem, S/25, p.62
Small car decision hinges on '59, 10/20, p.140
UAW contract extension? 7/21, p.65
UAW contract items, 10/20, p.140
Used machine tools, listing, 9/8, p.112

General Vacuum Corp.:
Booster pump, IE, 10/13, p.126
Welder, reactive materials, IE, 12/8, p.136

Geo-Drill Co.:
Formed, B, 12/1, p.66

Gerrad Co.:
Gun drilling, IE, 11/10, p.144

Giddings & Lewis Machine Tool Co.:
Diesinker, numerical control, 11/17, p.123

Gisholt Machine Co.:
Distributes Cri-dan machines, S/25, p.75

Gloss Bends Corp.:
Formed, B, 10/13, p.80

Globe-Wernicke Industries Inc.:
Buys Sheridan, B, S/18, p.78

Goodrich Co., B. F.:
Nygard reports recovery, 11/17, p.52

Gorrell & Gorrell:
Recorder for productive time and downtime, IE, 7/7, p.87

GPE Controls Inc.:
Name change, B, 9/1, p.55

Granite City Steel Co.:
Oxygen supply plant, 7/28, p.60; 9/1, p.78

Great Lakes Steel Corp.:
New steel series (GLX-W), 11/10, p.79

Grede Foundries Inc.:
Buys foundry, B, 9/8, p.73

Grieder Industries Inc.:
Loader and feeder, IE, 8/11, p.87

Gries Industries Inc.:
Elastic loop dynamometers test loads, IE, 10/20, p.276

Gries Reproducer Corp.:
Jointed parts diecast, Intercast process, S/18, p.99

Griswold Mfg. Co., F. T.:
Centering microscope for positioning, IE, 7/7, p.86
Optical leveler, IE, 8/4, p.115

Grumman Aircraft Engineering Corp.:
Automatic riveting-aircraft wings, 12/22, p.68

Guide Co.:
Arborless slitter, IE, 12/22, p.82

Gulf Oil Corp.:
Aluminum pigmented liquid coat, IE, 10/27, p.103
Cutting fluid proves efficiency for machining, 11/17, p.113
Grease for bearings, IE, 11/10, p.155

Gulton Industries Inc.:
Div. renamed, B, 9/1, p.54
Ultrasonic cleaner, IE, 9/15, p.220

H

H & B American Machine Co. Inc.:
Buys General Trading, S/4, p.89

Hamilton Mfg. Corp.:
Name change, 12/29, p.42

Hamilton Watch Co.:
Expands, 10/6, p.40

Hammond Machinery Builders:
Machines combined, IE, S/25, p.110

Hammond Tube Co.:
Organized, B, S/18, p.74

Hammond Valve Corp.:
Buys Hammond Brass, B, 12/15, p.119

Handy & Harman:
Honeycomb scrap, silver recovered, nitric acid solution, 9/22, p.96

Hanson-Van Winkle-Munning Co.:
Barrel door-horizontal, S/25, p.110
Cleaner strength check, IE, 10/27, p.103
Coating machine automatic, IE, 9/15, p.216
Racking device, IE, 7/21, p.138
Rent-a-line service, TO, 10/13, p.99

Harco Chemical Co.:
Film protects metal, IE, 10/20, p.276

Harnischfeger Corp.:
Welder, IE, 12/29, p.74

Harrop Ceramic Service Co.:
Furnace-sealed firing chamber, IE, 9/29, p.107

Harrup Electric Furnace Div.:
Test firing furnace, IE, 7/28, p.84

Hartford Screw Machine Co.:
Coolant clarifier aids finishing, 12/29, p.66

Hartman Metal Fabricators Inc.:
Lift forks adjustable, IE, 9/29, p.110

Hartzell Mfg. Inc.:
Formed, B, 11/10, p.103

Harvey Aluminum:
Titanium castings added, 10/27, p.63

Hauck Mfg. Co.:
Air gas burner, IE, 10/13, p.126

Hauserman Co., E. F.:
Research dept., B, S/25, p.76

Havir Mfg. Co.:
Buys Diebel line, 10/6, p.68

Hayes Inc., C. I.:
Gas generator, IE, 11/24, p.127
Furnace speeds vacuum treating, 7/21, p.126

Heald Machine Co.:
Grinder table, IE, 11/3, p.92
Tape holds work flat, 12/29, p.63

Heath Co.:
Vulcanized fiber containers, 12/29, p.70

Hef Inc.:
Ammonium plant, B, 7/21, p.104

Heidrick & Struggles Inc.:
Executive demand report, 7/14, p.56; 10/27, p.29

Heifred Co.:
Buys Hustler, B, 12/15, p.119

Heil Co.:
Buys Robertson Mfg., 7/7, p.63
Employees forego wage increase, 9/15, p.97
Finds customers' wants before building product, 7/14, p.102

Heli-Coil Corp.:
Sold, 12/29, p.42
Strong threads for aluminum, stainless inserts, 7/7, p.72

Helipot Corp.:
Beckman div., S/18, p.81

Herscott Co.:
Heating unit-portable, IE, 9/15, p.202

Hevi-Duty Electric Co.:
Buys Eclipse line, B, 7/28, p.61
Buys Stroman Furnace, B, 10/20, p.154
Circ-O-Therm oven, uniform heat, IE, S/11, p.88
Molybdenum tube furnaces, IE, 10/20, p.273

Higgins Metal Products Co.:
New name, B, S/25, p.76

High Vacuum Equipment Corp.:
Oven-heated furnace, IE, 11/10, p.141

Hobart Bros. Co.:
Attachment parallels welders, IE, 10/13, p.128
Heavy duty welder, IE, 10/13, p.123
Powrweld unit, IE, 10/6, p.97
Welder, IE, 12/8, p.136

Hoff, Canny, Bowen & Associates:
Engineer recruiting survey, 10/27, p.30
Engineer shortages predicted, 10/20, p.120

Hoffman Electronics Corp.:
Buys Micro-Precision, B, S/25, p.75

Homestead Valve Mfg. Co.:
Cleaner for heavy equipment, trailer-mounted, IE, 12/8, p.136

Hoover Co.:
Plans factory, B, S/25, p.76

Hoover Ball & Bearing Co.:
Buys Strom Steel Ball, 12/29, p.43

Code: B—*Briefs;* IE—*Industrial Equipment;* TO—*Technical Outlook*

Houdaille Industries Inc.:
Buys Provincial Eng., S 4, p.89

Houghton & Co., E. F.:
Atlanta plant site, B, 9 1, p.55

Howard Industries Inc.:
Buys motor line, B, 9 29, p.83

Howard Plating Industries Inc.:
Rubber stamis acids, Weir, 12 15, p.116

Hufford Co.:
Transfector contract, 12 22, p.60

Hughes Aircraft Co.:
Automatic tool changer-transfer line, 12 22, p.76

Humason Mfg. Co.:
Name change, B, 7 28, p.60

Hunt & Son Inc., C. B.:
Changes name, B, 9 29, p.82

Hunter Douglas: See Bridgeport Brass

Hupp Corp., K. P.:
Furnace 3100 F, IE, 11 17, p.134

Hussmann Refrigerator Co.:
Buys Dura-Cam plant, B, 10 6, p.68

Hyster Corp.:
Buys electric truck, IE, 8 11, p.60

Hydraulic Press Mfg. Co.:
Four-action press, IE, 9 8, p.118

Hydro-Line Corp.:
Mist eliminator, IE, 8 25, p.71

Hydrotherm Inc.:
Heat exchanger, IE, 8 11, p.77

Hyster Co.:
Lift truck design, IE, 10 20, p.81
Sell Caille interest, B, 12 15, p.153

I

Ideal Mechanical Mfg. Corp.:
Buys Sierra, B, 7 21, p.107

Illinois Machinery Co.:
Buys Automatic, B, 10 13, p.77

Illinois Tool Works:
Buys Shakeproof, B, 9 15, p.118
Buys Wilson, B, 9 15, p.118
Buys Wilson, B, 9 15, p.118
Buys Wilson

Loom's Machine Co.:
Loading ramp, IE, 10/20, p.289

Lueffer Furnaces Inc.:
Furnace elements status, IE, 10/13, p.128

Lukens Steel Co.:
Adds giant soaking pits, 9/8, p.112
Broadens service: Welding electrodes matched to plates, 9/22, p.66
Expansion program, 7/21, p.69
Widest sheet pack rolled, 12/22, p.30

Lundholm Mfg. Co.:
Filter-dragout conveyor, IE, 10/6, p.94

Lurie Bros. & Co.:
ETC case near climax, 12/8, p.65

Mc

McCarthy Foundry Co.:
Sold, 9/1, p.54

McCord Corp.:
Muffler redesigned, 9/8, p.60

McDanel Refractory Porcelain Co.:
Expands ceramic tube facilities, B, 10/20, p.154

McDowell Co. Inc.:
Low-alloy grades "X" to key "O" bolting steels, 7/21, p.120

McGraw-Hill Book Co.:
Lubrication manual, Engineering steel parts, machine tools, welding, 9/1, p.60
Machine Tool Engineering, 9/1, p.60
Welding Handbook, 9/1, p.60

McInnes & Co.:
Sold, 9/1, p.54

McKay Machine Co.:
Welding positioners, 7/21, p.116
Sold, 9/1, p.54

M

M-H Standard Corp.:
Forms new unit, 9/22, p.66

Magnaflux Inc.:
Buys Victor Electric Products Inc., B, 9/1, p.55

Magnetic Inc.:
Magnetic brakes, IE, 9/15, p.128

Magnetic Analysis Corp.:
Nondestructive metal tester, IE, 10/27, p.270

Magnus Chemical Co. Inc.:
Solvent for cutting oils and oil, IE, 9/1, p.93

Mallory-Sharon Metals Corp.:
Four new titanium plants for sheet, bar, etc., TO 9/15, p.118
Titanium pipe cut, 11/8, p.145

Manchester Tank & Equipment Co.:
Cost crisis: Production cut on shakes, post cut, 9/29, p.96

Mandrel Industries Inc.:
Buys Electronics div., 8/11, p.51

Mannesmann-Meer Engineering & Construction Co.:
Moves to Youngstown, changes name, 9/15, p.139

Manning, Maxwell & Moore Inc.:
Crane parts standardized, Shaw-Box, 9/8, p.126
Cranes packaged, IE, 8/11, p.87

Cushion-start drive units, IE, 10/20, p.288
Shell cores save machining, 9/8, p.102

Markem Machine Co.:
Imprints marked, IE, 9/22, p.106
Thermomark process, IE, 8/11, p.86

Market Forge Co.:
Finding customers' wants, 7/14, p.103

Marquardt Aircraft Co.:
Buys Associated Missile, B, 10/13, p.86
Buys Cooper Dev., B, 11/17, p.91
Elevated-temp. test machine, IE, 8/11, p.85

Martin Co.:
Honeycomb scrap reclaimed, 9/22, p.96
Space age jobs, 7/14, p.131

Materials for Electronics Inc.:
Formed, B, 11/17, p.88

Mather Spring Co.:
Torsion springs for cars, 8/4, p.70

Matthews Machine Works:
Boosts office efficiency, IE, 12/1, p.96

Maxi-Pull Engineering Inc.:
Chain-pull floor levers, IE, 8/25, p.111

Maxlow Machine Co.:
Merges, B, 11/10, p.111

Mb-B-K Co.:
Publishes machine tool issue, IE, 12/8, p.150

Mechanical Handling Systems Inc.:
Pallet conveyor, IE, 8/25, p.109

Meer Bros. & Aluminum Co.:
New location, buys, B, 9/22, p.42

Merz Co.:
Metallic paint, Alloy Prelude, 9/22, p.98

Metal Cutting Co.:
Tube cutter, IE, 9/15, p.117

Metals Products Inc.:
Wire conduit, Loxx, IE, 10/27, p.104

Metals Machine Co.:
Buys Cincinnati Tool, for J. Pim, 9/15, p.131
Plans new plant, 8/4, p.50

Metal Stampings & Spinning Co.:
Metal spinners, 7/28, p.61

Metallizing Engineering Co. Inc.:
Metallizing wire extended to 3/8-in. plastic parts, 8/4, p.100

Metal Processing Corp.:
Aluminum pretreats finish, 8/11, p.87

Metal Inc.:
Flow-control, IE, 7/21, p.133

Metallic Machine Tool Inc.:
Cuts 8/8 threads, IE, 7/28, p.81

Metallo Refractories Co.:
Open plant, B, 9/1, p.55a

Michigan Chemical Corp.:
Seawater magnesia plant, B, 7/28, p.64

Michigan Tool Co.:
Checks gear leads, IE, 11/10, p.118

Micro-Path Inc.:
Tape control on milling machine, IE, 12/22, p.81

Micromatic Hone Corp.:
Sold, B, 8/25, p.75

Micromedrical Mfg. Co.:
Profilometer measures roughness, IE, 7/21, p.138

Midland-Ross Corp.:
Buys Consolidated Metal Line, 11/10, p.106

McDvale-Heppenstall Co.:
Expands facilities, B, 10/13, p.77
Flame cutting forgings, 10/6, p.77

Milford Rivet & Machine Co.:
Riveter, IE, 9/22, p.104

Miller Electric Mfg. Co. Inc.:
Welder power, IE, 8/4, p.112
Welder, IE, 10/13, p.124

Mine & Smelter Supply Co.:
Merges Colorado Iron Wks. sub., 9/22, p.66

Minneapolis-Honeywell Regulator Co.:
Buys Marlon Electrical, 10/13, p.84

Mirro Aluminum Co.:
Expands, slab casting mill, 7/28, p.63

Misco Fabricators Inc.:
Stamps Berlin Chapman, 12/1, p.97

Mite Corp.:
Turbocharged APS Air Injector Systems Integration Div., 9/15, p.110

Mold Machine Co. Inc.:
Presses without toggles, IE, 7/21, p.140

Monarch Machine Tool Co.:
Cutter lathes, IE, 7/28, p.81
12/29, p.72

Morrell Inc.:
Gerrell, resigns, 10/20, p.128

Morse Chain Co.:
Oil-country drive sprocketing warehouse, 8/11, p.77

Morton Manufacturing Co.:
Duel capacity hoists, TO, 10/13, p.96

Motch Products Inc.:
Circulator blowers, 9/8, p.110

Motion Co.:
Stainless cast doors for grinding Mechanics Div., 12/29, p.62

Mott & Morgan Gather Co.:
Hydr. Work Cutter Div., 7/14, p.89

Mueller Co.:
Hydrant track control, IE, 7/14, p.111

Murray-Way Corp.:
Clamping products, IE, 9/15, p.101

N

Nash Inc., J. M.:
Buys Bell Machine, 12/1, p.97

National Acme Co.:
Cleveland, 8/11, p.20

National Aluminate Corp.:
Buys Oil Products, B, 9/29, p.81

National Automotive Engr. Inc.:
Closes Finney plant, 7/14, p.76

National Branch & Machine Co.:
Larger press model, IE, 10/27, p.103
Roll Rite gear inspection unit, IE, 8/4, p.117

National Carbon Co.:
C Div. product plant, 9/29, p.82
Corrosion resistant pumps, IE, 10/13, p.123

National Contractors Assn.:
Elects, B, 8/18, p.78

National Cylinder Gas: See Chemetron

National Forge & Ordnance Co.:
Changes name, 9/22, p.66

National Heat Treating Co. Inc.:
Stretch dies heat treated, 8/4, p.102

National Homes Corp.:
Aluminum-clad homes, new line, 9/29, p.59

National Lead Co.:
Hi-Phy, new formula for dies, 7/28, p.68

National Machinery Co.:
Cold headers, vibration low, IE, 8/11, p.87

National-Standard Co.:
Buys Cross Eng., B, 10/13, p.84

National Supply Co.:
Spang-Chalfant: Packaging long rods, 8/4, p.106

National Tool Co.:
Buys Auto-Vac, B, 8/4, p.89

National-U. S. Radiator Corp.:
Engineering Center dedicated, 10/6, p.68
Heavy loads handled easily, 9/22, p.92

Newark Stove Co.:
Screw setters speed assembly, 7/14, p.114

New Britain Machine Co.:
Numerical controls, 7/21, p.135; 8/4, p.111

New Holland Machine Co.:
Filters whip fume problem, 11/17, p.126

New Jersey Zinc Co.:
Electric-arc furnace for recovery of manganese and iron, more scrapless soon, 8/8, p.116

New York Air Brake Co.:
Hydrocyl Div., 7/28, p.61

Niagara Blower Co.:
Compressed-air aftercooler, IE, 11/10, p.151
Laundry cooler, IE, 9/15, p.200

Niagara Machine & Tool Works:
Plate bending roll controls, IE, 11/3, p.91; 11/17, p.158
Press brake guard, IE, 12/29, p.73

North American Aviation:
Chemical cutting shortens ex-engine airline, TO 10/6, p.71
Rubber engine chimney, 9/22, p.89

North American Nickel Corp.:
Formed to bid on nickel plant, 9/22, p.31

North American Philips Co.:
New silicon cells, Autometer, 11/24, p.111

Northwestern Steel & Wire Co.:
Lubricator packing systems, 11/17, p.116

Norton Co.:
High-tolerance seat, IE, 10/6, p.97
Lapping machine, IE, 12/15, p.193

Nu-Way Corp. of America:
Atmometer, IE, 7/21, p.140

O

Ocelco Products Inc.:
Steel cleaning compound, IE, 11/3, p.98

Oakite Products Inc.:
Rustproofer compound, IE, 10/6, p.97
Rust-stain for labeled parts, IE, 10/13, p.126

Ohio Crankshaft Co.:
Building block concept: Induction heat-treat flexibility equipment, 11/3, p.76
Tube bows Buttweller leaves no flash, 9/22, p.84

Ohio Electric Mfg. Co.:
Magnetic sheet separators, IE, 7/7, p.87

Ohio Foundry Co.:
Acquired, 8/4, p.83

Ohio Injector Co.:
Big company methods spur small firm's growth; AEC contracts for control for sodium coolants, etc., 11/10, p.80

Ohio Seamless Tube: See Copperweld

Oliver Instrument Co.:
Drill pointer, IE, 12/15, p.162

Olsgar Co.:
Pump saves power, IE, 8/11, p.90

Okonite Corp.:
Merged, B, 10/27, p.68

Olin Mathieson Chemical Corp.:
Consolidates units, B, 7/14, p.92
Forms foreign company, S/25, p.75

Oliver Machinery Co.:
Saw cuts nonferrous, 9/1, p/79

Onco Products Inc.:
Masking material for stainless parts, 9/22, p.106

O'Neil-Irwin Mfg. Co.:
Brake-two speeds, IE, 9/15, p.194
Die has roll inserts, IE, 11/3, p.94

Optical Gaging Products Inc.:
Contour transferber, IE, 7/7, p.87

Oregania Bridge Co.:
Name change, 7/28, p.60

Ormet Corp.:
Opens La., plant, 7/14, p.89

Osborn Mfg. Co.:
Brush resembles grinding wheel: "TY" tool wire brush bonded with plastic, 10/6, p.86

Osco Steel Co.:
Expands, buys Solar div., 12/29, p.42

Oster Mfg. Co., John:
Servomotor, IE, 10/20, p.276

Otis Engineering Co.:
Improved toolholder for stainless cutting, 12/22, p.67

Outboard Marine Corp.:
Buys Midland Co., B, 11/17, p.88

Owatonna Tool Co.:
Impact wrench, IE, 7/7, p.89

P

Pacific Scientific Co.:
Atmosphere furnace, S/11, p.80

Pandjiris Weldment Co.:
Arcwelder speed fast, IE, S/4, p.116
Piper Series manipulator, IE, 10/6, p.100

Panghorn Corp.:
Rotoblast unit for heavy loads, IE, 10/20, p.288

Pannier Corp.:
Portable marker, IE, S/11, p.88

Parker Aircraft Co.:
Quality control "egg crate" system: Machinists check short runs, 10/6, p.88

Pastushin Aviation Corp.:
Sold, B, 9/22, p.66

Pennsylvania Engineering Corp.:
Crane to serve converter, 7/21, p.116
Scale cars safer, IE, 12/15, p.136

Permitco Inc.:
Organized, B, 10/13, p.84

Pesco Products: See Borg-Warner

Peterson Machine Tool Inc.:
Sonoflux magnetic tester, IE, 11/10, p.151

Peterson Steels Inc.:
Strip steel div., B, 8/25, p.75

Petroleum Pipe & Supply Co.:
Sold, 9/1, p.55

Pettibone Mulliken Corp.:
Buys National Iron, B, 12/29, p.43

Philadelphia Coke Co.:
Name change, 7/28, p.60

Philadelphia Gear Corp.:
Swiss gear license, 11/3, p.67

Philco Corp.:
Appliances for mobile home, 12/15, p.82

Philips Electronics Inc.:
X-ray Spectrograph, IE, 7/14, p.144

Philips Incandescent Lamp Co.:
Modified cleating tool, 12/1, p.82

Pines Engineering Co. Inc.:
Press bender, IE, 7/28, p.85

Pioneer Engineering & Mfg. Co. Inc.:
Buys Wettlaufermn, 11/10, p.114

Pioneer Industries Inc.:
Cost Crisis: New layout saves $28.60 per unit (liquefied petroleum gas tanks), 7/28, p.64

Pittsburgh Plate Glass Co.:
Buys Barium Reduction, B, 11/17, p.94

Pittsburgh Steel Co.:
Billet mill, Monessen, B, 9/1, p.30

Porter Company Inc., H. K.:
Leschen expands, wire from steel rods, S/18, p.77
Refractories expands, B, S/4, p.83
Riverside-Alloy brass strip tailor-made, 10/20, p.153

Post Electronics:
Small items batched, IE, 11/3, p.92

Potter Instrument Co.:
Tape reader, IE, S/18, p.120

Pratt & Whitney Co. Inc.:
Clearance comparator, IE, 11/3, p.94
Gage checks ball bearings, IE, 12/8, p.135
Large capacity jig borer, IE, 7/14, p.138
Profiler automatic, IE, S/11, p.88

Precision Castparts Corp.:
Centrifugal casting upgrades stainless: Kenneth H. Pierce, 7/28, p.69

Press Automation Systems Inc.:
Shear-Pacer gage, IE, 10/27, p.101

Pritchard & Co., J. F.:
Merges Dover Mfg., 11/10, p.114

Profit Counselers Inc.:
Cost cutting programs, Pinney suggests, 7/21, p.74

Pullman-Standard Car Mfg. Co.:
Closes freight car mfg. plant, 9/1, p.91
Expands at Ala., B, 11/24, p.88

Purolator Products Inc.:
Extends line, B, 11/17, p.85

Pusey & Jones Corp.:
Diversify to metal fabrication, 11/3, p.66

Pyle-National Co.:
Buys Steber, B, S/18, p.78

Pyrometer Co. of America:
Organized, B, S/11, p.54

Q

Queen Products Inc.:
Almco finishing compound, IE, 10/20, p.284
Budget finishing unit, IE, 7/28, p.83

R

Radiation Counter Laboratories Inc.:
Cost Crisis: Our duplicator paid for itself, 7/21, p.112

Radio Corp. of America:
Feeder for fragile parts, 11/17, p.144

Ramo-Wooldridge: See Thompson Products

Rampe Mfg. Co.:
Mini-Tumbler, IE, 10/6, p.100

Ransohoff Inc.:
Washing machine, IE, 7/7, p.88

Rapids-Standard Co. Inc.:
Conveyor-line rollers, IE, 7/7, p.86

Rapistan-Keystone Co. Inc.:
Power-Push overhead conveyor, IE, S/4, p.112

Raymond Corp.:
Truck for narrow aisles, IE, 7/7, p.88
Walkie Stacker, IE, 10/6, p.94

Raytheon Mfg. Co.:
Ultrasonic grinder, IE, 12/1, p.89

Reading Crane & Hoist Corp.:
Hoist control, IE, 11/24, p.124

Reading Tube Corp.:
Copper refinery, B, 7/7, p.63

Reliance Electric & Engineering Co.:
Cost Crisis: One turret punch press saves, S/11, p.62
Mobile display tour, 12/15, p.89

Remington Rand:
Multiple-spindle increases output, 11/10, p.134

Renault:
Automated plants, S/18, p.57
Caravelle-models count on style, 10/27, p.49

Republic-Odin Appliance Corp.:
Buys Fowler Mfg., B, 11/17, p.94

Republic Steel Corp.:
Aluminized sheet market, 12/1, p.108
Atmospheres pick right to sinter iron, 7/28, p.80
Atmosphere furnace restores carbon, S/25, p.90
Automatic pouring (Ingotrol) ups yield, S/4, p.104
Bar Mill of Tomorrow (Chicago), S/25, p.117
Blooming mill stand erected, Youngstown, 9/29, p.59
Coal mine reopened, Verona, Pa., 10/13, p.42
Farrowtest: Unit finds hidden pipe defects, 9/1, p.62
Farrowtest: Tube testing gains precision, 10/13, p.104
Plate mill, Gadsden, Ala., 12/1, p.66
Powder parts connected from new alloy iron powder, 7/10/13, p.106
Shipping box collapsible, IE, 7/14, p.138

Research-Cottrell Inc.:
Dust collector, IE, 10/27, p.103

Reuland Electric Co.:
Spline coupling pump motors, IE, 11/17, p.141

Reynolds Metals Co.:
Aluminum alloy div., 9/22, p.96
Aluminum bridge unveiled, 10/27, p.136
Aluminum distribution transformer housings, 12/1, p.76
DupleX aluminum scalping machines, S/25, p.98
Expands, Listerhill, Ala., S/18, p.73
Headquarters building (pic) and story, 9/1, p.30
Heavy end aluminum pipe, 12/15, p.76
Profits, '58 vs '57, 7/28, p.27
Sheffield, Ala., mill ready, 12/1, p.66

Richmond Engineering Corp.:
Resistance wire, coil stress relieves weld, 9/1, p.66

Robbins & Meyers Inc.:
Buys Trade-Wind Motorfans, S/18, p.78
Tubeaxial fans, IE, 12/15, p.161

Rockwell Mfg. Co.:
Consider low-cost automation: Ben Eldridge, 9/22, p.98
Drill attach., slow speed, IE, 11/10, p.144
Drill mounted on track, IE, S/4, p.116
European report, 11/24, p.68
Standards dept. decentralized, 12/8, p.70

Roebling's Sons Corp., John A.:
Patenting change makes wire better: R. H. Hertzog, 7/14, p.120

Rogers Bros. Corp.:
Builds locomotives, 9/15, p.131

Rolled Alloys Co.:
Buys part of Packard Motor plant, 11/3, p.66

Roney & Co., Wm. C.:
Stock plan setup for AMC, 7/7, p.40

Ross Gear & Tool Co.:
Alloy extends fixture life, 7/7, p.71

Roth Mfg. Co.:
Buys Illinois Precise Casting, 9/29, p.83

Ruesch Machine Co., H. J.:
Roll straighteners, IE, 9/15, p.218

Russell, Burdsall & Ward Bolt & Nut Co.:
Bolts for buildings, B, 10/13, p.118
Fasteners simplified, 11/17, p.114

Rust-Oleum Corp.:
Sulfuric acid in the air: Corrosion map of U. S., 9/1, p.37

Ryerson & Son, Joseph T.:
Leaded steel tubing new, 11/3, p.41

S

St. Louis Steel Casting Inc.:
Buys Nat'l Tank, B, 11/24, p.96

Saco-Lowell Shops:
Expands, B, 7/14, p.92
Forms auto parts div., B, 10/27, p.63

Safety Industries Inc.:
Infrared ovens, IE, S/25, p.107
Motor alternator 400-cycle, IE, S/11, p.87

Sablin Engineering Co. Inc.:
Press extractor, IE, 10/20, p.273

Salem-Brosius Inc.:
Carrier truck handles big dies, 7/28, p.82
Clay gun, new concept, plugs blast furnaces, S/25, p.102
Diversifies, 7/14, p.94

Samuel & Co. Inc., Frank:
Buys Kittanning, B, 12/22, p.60

Sandvik Steel Inc.:
Slippery steel conveyor belts, 7/14, p.124

Sanford Process Co.:
Electrochemical hard coat for aluminum, 9/22, p.80

Schlage Lock Co.:
Buys Calif. Lock, B, 8/25, p.76

Schmitt Steel Inc.:
Modernization, B, 7/7, p.63

Sciaky Bros. Inc.:
Unit controls welders, IE, 12/15, p.155

Scientific Engineering Laboratory:
High vacuums, IE, 7/14, p.138

Scott Paper Co.:
Right materials boost drive speeds, 12/8, p.114

Scranton Corp.:
Buys Storm-Vulcan, 9/29, p.83

Scerest Machine Co.:
Shearing lines automatic, IE, S/11, p.85

Seidelhuber Iron & Bronze Works, Inc.:
Builds Alaskan mill, S/25, p.49

Selas Corp. of America:
Barrel annealing furnaces, 12/29, p.64
Vape-Sorber, IE, 11/17, p.138
Where faster heating saves: C. A. McFadden, 9/1, p.68

Sel-Rex Corp.:
Rectifier permits severe current etch prior to plating, IE, 7/7, p.85

Sesco Inc.:
Line feeds fonnage coils, IE, 11/17, p.133

Seymour Mfg. Co.:
Installs Mesta mill, B, 10/27, p.63
Thin strip annealer, B, 7/28, p.60

Shaw-Box Crane & Hoist: See Manning, Maxwell

Sheffield Corp.:
Precisionaire gage, three sizes in one section, 11/10, p.118
Ultrasonic machining unit, IE, 10/6, p.91

Sheldon Machine Co. Inc.:
Precision lathe, IE, 9/22, p.103

Shenango Furnace Co.:
Ore ship, Shenango II, 12/29, p.29

Shepard Warner Elevator Co.:
Merging, B, 8/25, p.76

Sieburg Industries Inc.:
Machine speeds small part milling, IE, 12/29, p.75

Silent Hoist & Crane Co.:
Strad-Krane, IE, 8/4, p.111

Simplex Time Recorder Co.:
Buys IBM div., B, 11/17, p.85

Singer Mfg. Co.:
Military products div't, 9/29, p.62

Smith Corp., A. O.:
CO_2 welder makes casting repair easier; J. J. Chyle, 11/17, p.110
Motor switch, self-cleaning, 10/6, p.34
Motor switch, sealed protection, IE, 11/24, p.121
Pickle liquor disposal made practical, 7/28, p.76

Smith's Magnet Sales Co.:
Bearpaw magnet eases steel lifting, 11/17, p.120

Snyder Tool & Engineering Co.:
Changes name, B, 12/1, p.66

Solar Aircraft Co.:
Coatings help metals beat heat; John V. Long, 7/28, p.66
Foil-thin metal ribbon into honeycomb core, 9/29, p.102
Gas turbine for boats, TO, 8/25, p.79

Soule Steel Co.:
Builds rolling mill, B, 9/15, p.139

Southern Steel Service Co. Inc.:
Formed, B, 8/11, p.54

Southwestern Ohio Steel Inc.:
Expands facilities, B, 10/20, p.153

Special Machine Co.:
Lifting device, IE, 11/10, p.146

Spee-Flo Co.:
Airless paint spray, IE, 11/10, p.156

Speilman'n'te Co.:
Weld-aluminite, IE, 11/17, p.144

Spitfire Tool & Machine Co.:
Gyro-Matic lapping machine, IE, 12/1, p.92

Sprout, Waldron & Co.:
Pelletizing machine rollers, tungsten carbide coatings, 9/22, p.86

Spurgeon Co.:
Automatic bar or tube feeding system, 8/18, p.117

Square D Co.:
Packaged drives, IE, 10/6, p.97

Stamping Specialty Co. Inc.:
Oiler extends die life, IE, 9/15, p.214
Strip stock oiler, IE, 8/18, p.120

Stanat Mfg. Co. Inc.:
Strip mill, IE, 12/1, p.92

Standard Pressed Steel Co.:
Nuclear unit, B, 11/10, p.108
Self-swaging nuts in thin sheet, IE, 12/22, p.81

Stanley-Humason Inc.:
New name, B, 7/28, p.60

Starrett Co., L. S.:
Mernier height gage, IE, 9/29, p.108

Stearns & Co. Inc., E. C.:
Buys foundry, B, 11/10, p.108

Stearns Electric Corp.:
Clutch-brake magnetically set, IE, 9/8, p.120

Stearns Magnetic Products:
Drum separator for tramp iron, IE, 9/8, p.119

Steel Co. of Canada Ltd.:
Hamilton Wks. strike, 10/6, p.110
Pipe plant begun, 9/1, p.54

Steel Improvement & Forge Co.:
Equipment for Argentine plant, 8/4, p.70
How to forge molybdenum, 11/3, p.84

Steel Rock Iron Mines Ltd.:
New plant upgrades ore, 7/21, p.85

Sterns Control Corp.:
Counters, IE, 12/1, p.92

Stewart-Warner Corp.:
Trolley wheel lubricator, IE, 7/28, p.84

Stocker & Yale Inc.:
Production comparators, IE, 10/6, p.97
Projector shows dual image, IE, 11/10, p.146

Stokes Corp., F. J.:
Closure molding press, IE, 10/20, p.286
Compact press, IE, 10/13, p.124
Vacuum metal lab, 9/1, p.54
Vacuum pumps, IE, 11/10, p.146

Stratford Chemical Co. Inc.:
Conveyor aids buffing, IE, 11/3, p.94

Studebaker Hydraulic Products Co.:
Press stop control, IE, 10/20, p.278

Studebaker-Packard Corp.:
Churchill resorts Lark and Silver Hawk, 10/20, p.139
Cost cutting '59 trucks, 11/17, p.72
Foundry saves annually, core room, 10/20, p.199
Labor contract effective Sept., 7/7, p.30
Studies new management, diversification, 8/18, p.59

Sumitomo Metal Industries Ltd.:
Steel output, 8/25, p.42

Sunbeam Corp.:
Buys Westinghouse facilities, Mendville, 8/25, p.79

Sundstrand Machine Tool Co.:
Buys rights to milling machine, B, 12/29, p.42
Omnimill, IE, 10/13, p.124
Rigidmil, IE, 7/21, p.136

Superior Hone Corp.:
Honing machine, IE, 8/18, p.122

Superior Tube Co.:
Product development, job definition aids, 10/6, p.49

Supreme Steel Equipment Corp.:
Buys Universal Steel Equip., 9/8, p.78

Surface Combustion Corp.:
Janitrol Div.: Preassembly cuts painting and handling cost, 8/25, p.80

Surveyor Service Co.:
Renamed, B, 8/11, p.54

Sutorbilt Corp.:
Blower, IE, 9/15, p.194

Swartwout Co.:
Valves actuator, IE, 12/8, p.136

Swayne, Robinson & Co.:
Azcast CO_2 molding process upgrades castings, 12/15, p.140

Swedlow Plastics Co.:
Sells honeycomb thin metal coil, 9/29, p.102

Sweeney Mfg. Co., B. K.:
Flexibility pays off on short lots, 8/4, p.96

Sylvania Electric Products Inc.:
Shows sample of Sylouette, TV console, 7/14, p.107

Syntron Co.:
Feeder for bulk, IE, 9/15, p.216
Vibratory feeders, IE, 10/20, p.280
Vibrator forging machine, IE, 9/22, p.108

T

Taylor-Winfield Corp.:
Benders, IE, 7/28, p.84; 10/13, p.124
Extension, 8/25, p.42
Unit regulator, IE, 10/6, p.100

Technicraft Laboratories:
Cost crisis: Better tooling cuts cost (microwave components), 9/15, p.178

Temco Aircraft Corp.:
Honeycomb process, 8/25, p.96

Tennessee Eastman Co.:
Shell cores for machining filter press plate, 9/8, p.102

Testing Machines Inc.:
Color indicates hardness, IE, 10/13, p.126

Textrol Inc.:
System prevents repeats, IE, 12/1, p.95

Textron Inc.:
Buying Waterbury Farrel Foundry, 7/7, p.63

Thinkol Chemical Corp.:
Fires prepackaged liquid rocket engine, 11/10, p.70

Thomas Industries Inc.:
Buys Benjamin Elec., 12/1, p.67

Thomas Machine Mfg. Co.:
Wall radial drill, IE, 7/7, p.86

Thompson Grinder Co.:
Grinder for large work area, IE, 7/14, p.137

Thompson Products Inc.:
Buys Federal Industries, B, 9/1, p.55
Doolittle heads Space Lab., 10/13, p.77
How computers will help steelmakers, 11/10, p.126
Ramo-Wooldridge report, 7/21, p.107
Ramo-Wooldridge merged, 10/6, p.43
Regroups divisions, 11/3, p.66
Single-diamond tech. dresses double grinding wheel, 12/15, p.134

Thor Power Tool Co.:
Air hammer eliminates dust in drilling, IE, 8/4, p.116

Thrall Car Mfg. Co.:
Buys Western Railway Equip., 9/1, p.55

Thriftmaster Products Corp.:
Drill heads, IE, 12/15, p.154

Timken Roller Bearing Co.:
Buys Birdsboro mill, 11/3, p.66
Jet plane for executives, 9/8, p.55
Magnet turner, 8/11, p.84
Piercing mill installed, 9/29, p.82

Titanium Corp. of America:
Joins German firm in new company, 8/11, p.32

Titeflex Inc.:
Calif. plant, B, 10/13, p.82

Tobin-Arp Mfg. Co.:
Honer, IE, 9/29, p.108

Tomkins-Johnson Co.:
Builds, B, 7/7, p.63

Topp Industries Inc.:
Buys Phoenix firms, B, 12/15, p.119

Torit Mfg. Co.:
Collector controls mists, IE, 10/6, p.92

Torrington Mfg. Co.:
Verti-Slide, IE, 11/10, p.155

Towmotor Corp.:
Crane boom, IE, 12/22, p.84
Fork adapter, IE, 12/15, p.161

Townsend Co.:
Rivet setter, IE, 9/29, p.108

Trebon Engineering Corp.:
Lube automatic, IE, 9/15, p.206
Spindle lubricator for steel mill, 9/1, p.76

Tracer Control Co.:
Tool control system, IE, 7/14, p.142

Transue & Williams Forging Co.:
Monel grates shave repair costs, 7/14, p.132

Trans-Weigh Co.:
System controls flow rates at J&L, 9/15, p.188

Troske Mfg. Co.:
Rotary table line, IE, 8/25, p.110

Truck-Man Lift Trucks:
Platform truck-tower differential, IE, 8/18, p.117

Truck Scale & Research Corp.:
Portable testing unit, IE, 7/21, p.136

True-Trace Sales Corp.:
Synchro-Trace system, IE, 11/17, p.144

Turbo Dynamics Corp.:
Buys Huber Tool, B, 12/15, p.119

Turchan Follower Machine Co.:
Hydro-Router, IE, 8/4, p.112
Tracer kit, tips, 11/24, p.128

Turco Products Inc.:
Turcoat cleans phosphates iron, IE, 10/20, p.282

Tu-Sa-Man Machine Co. Inc.:
Friction saw, IE, 8/11, p.86

U

Uhrden Inc.:
Dumper-stacker, IE, 12/22, p.84
Tuburlift, IE, 7/21, p.136

Underwood Corp.:
Buys Canoga, B, 8/11, p.55
Two machines cut costs . . . cold header and thread roller, 10/6, p.74

Unimatic Machine Products Inc.:
Drill-automatic, IE, 10/13, p.124

Union Carbide Corp.:
Ferrochrome produced, 8/25, p.105
Nuclear and ore lab, 8/11, p.55

Union Carbide Chemicals Co.:
Service lab, B, 10/20, p.153

Union Spring & Mfg. Co.:
Furnace line speeds output, 8/18, p.101

United Engineering & Foundry Co.:
Blooming mill for U. S. Steel, 9/29, p.82

United Shoe Machinery Corp.:
Riveting tool portable, IE, 9/8, p.119

U. S. Burke Machine Tool:
Duplex half-mill unit, IE, 12/15, p.158
Head for milling machine, IE, 9/15, p.210

United States Casting Repair Corp.:
Crack detector, IE, 7/7, p.85

U. S. Electrical Motors Inc.:
Cutting fluid ups machining efficiency, 11/17, p.113

United Steel Products Corp.:
Name change, B, 7/7, p.62

U. S. Steel Corp.:
Airsteel for missiles and rockets: Superstrength steel hardens in air, 9/8, p.104; 9/1, p.31
Aluminized steel sheets, new markets at Gary, 9/22, p.113
AS&W:
Consolidates purchasing, 12/1, p.66
Donora warehouse planned, 8/18, p.77
Wire rods, bellwether, 11/3, p.45
Blough: Industry is inflation scapegoat, 9/22, p.31

Code: B—*Briefs;* IE—*Industrial Equipment;* TO—*Technical Outlook*

Columbia - Geneva: Ingot buggy stops preset, 11/17, p.120
Consolidated Western: Missile work, pros and cons, 10/13, p.52
Corrosion study, 10/13, p.42
Edgar Thomson Wks.: Wet gas scrubber for openhearth exhausts, 10/6, p.71; TO, 11/17, p.107
Expands: Blooming and structural mill at Chicago; office building, Ala.; railroad and generating plant, Canada, 9/29, p.82
Export prices issued, 10/13, p.142
Fairless gets ladle crane, 7/21, p.102
Forms divisions, 7/14, p.89
Geneva, Utah, Wks.: Electronics (gages) regulates strip mill, 10/27, p.94
Homestead Wks.: Shear cuts steel beams, 8/18, p.74
Homestead forging facilities, 9/15, p.131
Hood (president) soon 65, 11/24, p.51
Lab, Duquesne, 9/15, p.131
Lab for instrumentation, 9/8, p.73
National Tube, 2nd continuous mill, 7/21, p.99
Negotiating team, Cooper and Larry, 11/24, p.51
Ore concentration mill, Quebec, 9/8, p.40
Rail items discontinued at Johnstown Wks., 10/20, p.129
Rankin Works to close, merges with Donora, 8/11, p.103
Sheet processing bay structure, 9/8, p.76
Sintering plant-Youngstown: Mix is key to better sinter, 7/21, p.120
Structural mill, S. Chicago Wks., 12/8, p.95
TC&I:
Fairfield Wks. annealing line, 7/28, p.61 and pickling line, 10/13, p.77
Mill saves with multipurpose grease, 8/11, p.68
Tyson warns on controls, 10/20, p.129
U. S. Homes shifts plant operation, 10/27, p.63

U. S. Steel Export Co.:
Export prices up, listed, 8/18, p.49

Universal-Automatic Corp.:
Opposed-machining unit, IE, 12/8, p.136

Universal-Cyclops Steel Corp.:
Empire-Reeves revamps strip line reversing intermediate roughing mill, 10/6, p.80
In-Fab plant, spice-suited technicians, 11/17, p.63
Specialty service center, 9/29, p.83

Universal Dynamics Corp.:
Dehumidifier, IE, 10/13, p.126

V

Vac-U-Lift Co.:
Unit lifts water heater tanks, 7/28, p.70
Valcon Galvanizing Inc.:
Installs galvanizing kettle, 10/6, p.67

Valvair Corp.:
Control valve, IE, 9/22, p.104

Van Keuren Co.:
Gage search, 10/27, p.98

Vanguard Engineering Co.:
Aero-Crane, IE, 9/8, p.117
Powr-Wheel, IE, 11/24, p.128

Vare Bros. Construction Co.:
Magnetic drill press for transmission poles, 7/14, p.129

Veet Industries:
Table on radial drill, IE, 11/17, p.134

Verson Allsteel Press Co.:
Gang punching machine-large bed IE, 8/4, p.115

Vertol Aircraft Corp.:
Research, new products and sales slump, 12/8, p.75

Viking Equipment Co.:
Studwelding stainless, 7/7, p.70

Vitro Corp. of America:
Defense work venture with Koppers, 10/27, p.63

Vulcan Mold & Iron Co.:
Expansion completed, 9/15, p.131

W

Waldron & Co. Inc.:
Cost crisis entry: Efficient machines cut product price, 9/8, p.98

Wall Colmonoy Corp.:
Alloy brazes wide gaps, IE, 9/8, p.118
Proposes bronze test for shear strengths, 9/1, p.66
Vacuum furnace installed, B, 8/11, p.54

Wallace Barnes Co.:
Nylon tubing, 8/25, p.102

Wallingford Steel Co.:
Electronic tube test, 12/22, p.79

Waltz Furnace Co.:
Heat treat furnace controls, IE, 10/27, p.101
Three-unit setup, IE, 9/15, p.202

Warner & Swasey Co.:
Ceramic tools study at Ohio State Univ., 12/15, p.128
Construction machine (Gradall) slashes furnace maintenance costs, 12/8, p.116
Plant superintendents carry weight of production, George Meyer report, 11/3, p.50

Warner & Swasey Research Corp.:
Forms instrument div., 11/17, p.85

Warner Electric Brake & Clutch Co.:
Control die for loading blanks in die area, 9/29, p.89

Waterbury Farrel Foundry & Machine Co.:
Sold, 7/7, p.63

Watson Stillman: See Farrel-Birmingham

Wayne American Co.:
Buys Carver Foundry, 8/4, p.83

Webber Engineering Corp.:
Freezer, IE, 7/21, p.142

Weirton Steel Co.:
Mill for research at Syracuse Univ., 8/11, p.84
Self-fluxing sinter line, 11/3, p.80

Weldueton Corp.:
Generator R-F power, IE, 10/20, p.276

Well Mfg. Corp.:
Saw-convertible, IE, 8/18, p.120

Wendt-Sonis Co.:
Econogrind, IE, 11/10, p.144

Western Electric Co.:
Close Duluth plant, 7/21, p.99

Western Sealant Co.:
Teflon sealed in metal, 12/8, p.127

Westinghouse Electric Corp.:
Business forecast, improved sales orders, 12/29, p.29
Exploring the frontiers of corrosion, 7/7, p.82
Fans, IE, 8/18, p.125; 9/22, p.106; 9/29, p.108
Melting furnace, IE, 8/25, p.108
Power transformer plant, Ind, 7/14, p.96
Savings plan pushed as counter proposal to SUB, 10/27, p.37
Sells Meadville facilities, 8/25, p.75
Transducer widens use of ultrasonics, 12/29, p.67
Vacuum melted alloy W-545 for high temp., 7/7, p.72
X-ray control, IE, 11/10, p.146

Westinghouse International Atomic Power Co.:
Formed in Geneva, 9/15, p.98

Wettlaufer Engineering Corp.:
Sold, B, 11/10, p.114

Wheelabrator Corp.:
Barrel finisher vibration free, IE, 9/1, p.79
Buys Crandall Eng., 8/4, p.89

Wheeling Steel Corp.:
Buys Alan Wood nailmaking facilities, 8/18, p.40

White Motor Co.:
Plastic truck cab, 10/27, p.50

Whitehead Metal Products Co.:
Renamed, 12/22, p.37

Wickman Mfg. Co.:
Oscillating grinder, IE, 10/13, p.123

Wiedemann Machine Co.:
Drawings direct press, IE, 10/6, p.94

Willys Motors Inc.:
Argentine Willys forge plant, 8/4, p.70
Plans small car revival in Brazil (Ace scheduled), 7/28, p.47

Wilson Inc., Thomas C.:
Furnace checker cleaning, 8/4, p.102

Wilson Buffing Chuck & Machine Co.:
Reciprocating buff machine, IE, 11/24, p.121

Wilson's Sons Inc., William:
Machine solves dust problem, 7/21, p.130

Winsmith Inc.:
Worm gear speed reducer, IE, 10/13, p.126

Wintriss Inc.:
Missing parts detector, IE, 12/15, p.162

Wiretver Corp.:
Autostrapper, IE, 11/3, p.94

Worcester Pressed Steel Co.:
Cost crisis entry: Furnace slashes annealing costs, 11/3, p.70

Worthington Corp.:
How Worthington runs like federation of smaller firms, 11/17, p.67
Portrait of a purchasing director (Gibson), 12/1, p.49
Welding head manipulator, IE, 7/7, p.88

Wright Aeronautical Div.:
Connector rings made of welding tubing, 8/25, p.105

X Y Z

Yale & Towne Mfg. Co.:
Cab visibility, IE, 11/10, p.148
Combines fork and boom, IE, 8/18, p.118
Lift truck die handler, IE, 8/11, p.85

Youngstown Coal Pipeline Co.:
Formed, Ohio line, 12/22, p.60

Youngstown Kitchens: See American Radiator

Youngstown Sheet & Tube Co.:
Continuous tin plate annealing line, 7/28, p.74
Roof bolt price up, 9/1, p.88
Strip mill revamped, Campbell Wks., 11/10, p.103
Tube research lab, 8/4, p.124

Yuba Consolidated Industries Inc.:
Buys Judson Pacific-Murphy, 7/21, p.107
Buys Western Rolling Mills, 8/25, p.76
Buys Southwest Welding, 12/29, p.43

Zagar Inc.:
Air-oil feed drill, IE, 10/6, p.92
Drill head adjustable, IE, 8/4, p.115

Zephyr Mfg. Co.:
Blindriller locates holes, IE, 9/15, p.194

AUTHOR INDEX

C

Chyle, J. J., A. O. Smith Corp. CO_2 welder makes casting repair easier. 11/17, p.110

D

Davisson, R. Raymond, General Electric Co., What's inside the coil? 9/8, p.106

E

Eldridge, Ben, Rockwell Mfg. Co. and **J. L. Fisher Jr.**, Bellows Co., Consider low-cost automation. 9/22, p.98

F

Fisher Jr., J. L., Bellows Co., and **Ben Eldridge**, Rockwell Mfg. Co., Consider low-cost automation. 9/22, p.98

H

Hertzog, R. H., John A. Roebling's Sons Corp., Patenting change makes wire better. 7/14, p.120

Holt, J. P., Basic Inc., Tar bonds oxygen vessel bricks. 7/7, p.74

J

Jones, N. B., General Electric Co., Where continuous annealing is going. 7/28, p.72

K

Keefe, A. R. and **M. R. Koehn**, Axle Div., Eaton Mfg. Co., Dew point monitoring pays off. 10/13, p.100

L

Lewis, Floyd A., Aluminum Association

1. Aluminum rivets upgrade parts made of aluminum. 12/1, p.86
2. Aluminum bolts work the best—for aluminum fabricating jobs. 12/8, p.130
3. Aluminum screws cut costs. 12/15, p.131

Long, John V., Solar Aircraft Co., Coatings help metals beat heat. 7/28, p.66

M

McFadden, C. A., Selas Corp. of America, Where faster heating saves. 9/1, p.68

P

Pierce, Kenneth H., Precision Castparts Corp., Centrifugal casting upgrades stainless. 7/28, p.69

S

Such, Irwin H., editor-in-chief, STEEL, Special report: Soviet steel industry. 9/8, p.85